

Perspectives

Under the influence: system-level effects of alcohol industry-funded health information organizations

Nason Maani^{1,2, }, May CI van Schalkwyk^{3, } and Mark Petticrew^{2,4}

¹Global Health Policy Unit, School of Social and Political Science, University of Edinburgh, 15a George Square, Edinburgh, EH8 9LD, UK

²Department of Public Health, Environments and Society, Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine, 15-17 Tavistock Place, London WC1H 9SH, UK

³Department of Health Services Research and Policy, Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine, 15-17 Tavistock Place, London WC1H 9SH, UK

⁴UK PRP SPECTRUM Consortium, Usher Institute, Old Medical School, University of Edinburgh, Teviot Place, Edinburgh EH8 9AG, UK

*Corresponding author. E-mail: mark.petticrew@lshtm.ac.uk

Abstract

There is now an established body of evidence that the alcohol industry seeks to obstruct public health policies that could affect the availability, affordability or marketing of alcohol. In parallel, the alcohol industry is active in funding corporate social responsibility initiatives, with a particular focus on ‘responsible drinking’ campaigns, often facilitated by national-level charities established and/or funded by the alcohol industry and associated organizations. While evidence continues to grow regarding biases in the content produced by such health information organizations, they remain active in partnerships with government health departments on national health promotion campaigns and provide a range of health-related information to the public, community organizations and schools. To understand the implications of such access for policymakers, researchers and the public, there is a need to consider the wider, system-level influences of such organizations and their place in wider alcohol industry strategies. In this article, we describe evolving evidence of the direct and indirect strategic effects of such organizations and demonstrate how they serve key roles in the alcohol industry through their existence, content, partnerships and public profiles. We end by considering the implications for how we conceptualize charities established or funded (entirely or partly) by harmful commodity industries, and to what extent current conflicts of interest guidelines are sufficiently effective.

Keywords: commercial determinants of health, alcohol, public–private partnerships, documentary analysis, policy analysis

INTRODUCTION

The alcohol industry, which has been defined as including the economic actors involved in the production, distribution and marketing of alcohol as well as trade associations and related social aspects organizations (McCambridge *et al.*, 2018), is a harmful product industry. Alcohol is among the leading causes of preventable death globally, and the leading risk factor for disability-adjusted life years among those aged 25–49 (Collaborators, 2020). Those who drink at the most harmful levels constitute a disproportionate amount of

overall alcohol sales, meaning the industry is disproportionately dependent on them for revenue (Foster *et al.*, 2006), and targets its marketing efforts accordingly (Maani Hessari *et al.*, 2019a). The commercial value of underage drinking to the industry is also significant. In the USA in 2016 alone, underage alcohol consumption was estimated to yield 17.5 billion dollars in revenue, approximately 7.5% of all revenue earned during that time (Eck *et al.*, 2021). The alcohol industry is increasingly globally consolidated (Hanefeld *et al.*, 2016), with documentary analyses demonstrating strong parallels in structure and strategy to the tobacco industry (Hawkins

Contribution to Health Promotion

- The alcohol industry is increasingly understood as a conflicted and inappropriate partner for health promotion
- Despite this, national alcohol-industry funded health information charities remain prominent and engage in a range of partnerships and health promotion campaigns
- This article brings together the latest evidence on how such organizations, through their content and their existence, serve strategic functions for the alcohol industry

et al., 2018), and in some cases examples of alcohol and tobacco manufacturers advancing mutual interests in collaboration (Lesch and McCambridge, 2022).

Taken together, these patterns reflect a fundamental conflict between the need for population-level approaches to reducing alcohol-related harm and the business interests of the alcohol industry. Indeed, there is now an established and growing evidence base of efforts by the alcohol industry to shape science and policy discourses in ways that undermine effective regulation and defend or develop their markets, consistent (and in some cases linked with) similar efforts by other harmful product manufacturers (Madureira Lima and Galea, 2018). This evidence is increasingly being applied in guidance to policy and media members. According to the WHO European Framework for Action on Alcohol 2022–2025, member states reported ‘significant and sustained opposition by economic operators in trade and production’ as a key barrier to the implementation of the most high-impact and cost-effective policies (World Health Organization, 2022). A recent guide produced by the WHO for reporters communicating on alcohol issues notes that pressure from commercial operators may include entities other than producers, such as industry-funded journalism awards, advertising, industry-owned media outlets, industry-funded think tanks and those with associated conflicts of interest (World Health Organization, 2023).

It has been argued by coalitions of scholars and advocates that the alcohol industry in particular, due to the global burden of alcohol harms, reliance on harmful consumption of its products for a substantial proportion of sales, its increasingly global consolidation and growing evidence of parallels in ongoing corporate political activity, requires a greater policy alignment with approaches to dealing with the threat to public health posed by the tobacco industry (McCambridge and Morris, 2019), including a possible global Framework Convention for Alcohol Control (Au Yeung and Lam, 2019). Yet unlike

the tobacco industry, the alcohol industry remains viewed by segments of public health policy, practice and academia as a legitimate partner in important areas such as the development of national alcohol policy (Bakke and Endal, 2010), and global health initiatives (Marten and Hawkins, 2018).

Analyses of industry activities mainly focus on one area of their activity, e.g. sales, advertising and marketing, setting (e.g. schools, communities), policy influence or corporate social responsibility (CSR). It has however been argued that to understand the complex relationships between unhealthy commodity industries, policy-making and government agencies, there is a similar need to take a systems perspective on commercial influences on health, including, critically, understanding wider efforts to shape evidence, frame narratives and build constituencies through third-party organizations (Gilmore *et al.*, 2023). One mechanism through which such efforts may be perpetuated, and which has been an increasing focus of scholarship, is industry-funded alcohol health information organizations (IFAIOS) (Pietracatella and Brady, 2020).

The alcohol industry funds a range of such national-level health information organizations, often registered as charities, that ostensibly seek to educate the public on alcohol-related harms. Such organizations include, for example, Drinkaware (UK), Drinkaware Ireland, DrinkWise (Australia), the Foundation for Advancing Alcohol Responsibility (US) and the Association for Alcohol Responsibility and Education (South Africa). In addition, there are other organizations that, although not officially formed by the alcohol industry and may receive funds from other sources, attract industry funding and partnership, signalling that they are of likely strategic benefit to wider industry agendas. To examine the strategic purpose of these types of organizations and partnerships, there is a need to both independently evaluate the nature of the materials and campaigns they produce, and more broadly understand the system-level effects of such organizations, and how they may serve wider industry interests, in part through their perceived separation or ‘independence’ from the industry in the mind of policy-makers and the public. In this perspective, we bring together existing evidence to conceptualize the system-level impacts of IFAIOS for norms, policy and public health.

THE ORIGINS OF INDUSTRY-FUNDED ALCOHOL INFORMATION

Alcohol industry funding of third-party organizations with an education remit has a long history, dating back to the 1950s (Anderson, 2003). These early organizations have been described as serving to manage issues that might be detrimental to business through, for

example, influencing alcohol policy, broadening industry influence and legitimacy, recruiting scientists, organizing and hosting conferences and other meetings and preparing and promoting self-regulatory approaches to alcohol (Anderson, 2003; Babor, 2009). At times this also included providing information on alcohol harm to the public but also other activities such as funding science, lobbying or proposing policy alternatives. Due to the co-ownership of the Miller Brewing Company (MBC) by Phillip Morris International (PMI), analyses of internal tobacco industry documents have revealed the extent to which MBC adopted strategies from PMI and explicitly sought to protect revenue by being ‘...a supporter of education and research to combat the problem of alcoholism rather than imposition of additional restrictions on the use of alcoholic beverages’ (McCambridge *et al.*, 2022). In 1996, the MBC vice president of corporate affairs noted in a presentation to an industry group that ‘...the number one priority for the alcohol beverage industry...over the next five years...must be protecting and promoting the social acceptability of our product. Alcohol education will play a critical role in accomplishing this task’ (McCambridge *et al.*, 2022).

In a study tracing the evolution of alcohol industry social aspects public relations organizations over time, McCambridge and colleagues note three main phases in the evolution of such groups (McCambridge *et al.*, 2021). Firstly, from the 1950s onwards, with the involvement of the public relations company Hill and Knowlton (whose clients have included members of the tobacco, asbestos and fossil fuel industries), the distilled spirits industry in particular sought to fund research to define alcoholism, rather than alcohol use, as problematic. From the 1970s onwards, they note increasing organization of the US alcohol industry across beverage categories through the formation of the Distilled Spirits Council of the United States (DISCUS), which sought in the 1980s to ‘clarify public understanding that alcohol abuse rather than use is the source of alcohol-related problems’ and that ‘the liquor industry is actively interested and concerned about the problems of alcohol abuse’. DISCUS explicitly aimed to ‘de-sensationalize the various issues related to alcohol abuse, and to suggest that the problems are manageable through enhanced personal awareness and responsible behaviour by the target audience’. The third phase, from the 1980s onwards, was a response to the global existential threat posed by the scientific evidence on policies that reduce alcohol harm through price, availability and marketing. In 1986, the DISCUS vice-president produced an analysis showing that scientific consensus on such policies could ‘...gradually wear down individual industry associations and producers in most countries’, warning that ‘if the control

of alcohol availability agenda becomes worldwide public policy, there will be no industry as we know it’ (McCambridge *et al.*, 2021).

It is therefore apparent that the potential threat to revenue posed by evidence-based policy is a driving force for the alcohol industry funding of educational initiatives by third-party organizations, initiatives which in turn serve several key strategic goals. These organizations help place a greater emphasis on individual rather than industry responsibility for alcohol harms, and on educational activities that align with their commercial interests (van Schalkwyk *et al.*, 2022). They help to cast the alcohol industry as a ‘concerned citizen’ and partner of governments and health agencies, rather than a profit-driven enterprise that obstructs effective public health policymaking and transparent labelling of its products and is disproportionately reliant on revenue from those drinking at higher levels. It is important to note that the industries’ funding of health information organizations may have distinctive functions beyond the nature of the specific content produced by such organizations, as their presentation as charities, perceived as independent from the industry, allows for the industry to build partnerships and perceptions beyond those the industry could achieve in isolation.

Despite this history, their participation in national awareness campaigns, their logos being signposted on alcohol products, in the most alcohol advertising in print and on TV, and in some high-profile partnerships with public health authorities, the content of industry-funded alcohol information organizations has historically attracted less attention from researchers compared with the areas such as alcohol marketing. In more recent years, evidence from public health research shows industry-funded education charities are not neutral education sources, but instead, in their content as well as their form, serve as an extension of alcohol industry marketing and political activity. They produce content that echoes industry discourses of ‘misuse’ and ‘personal responsibility’ (Smith *et al.*, 2006; Maani Hessari and Petticrew, 2018), and convey misinformation regarding alcohol harms (Lim *et al.*, 2019; Peake *et al.*, 2021; Dumbili *et al.*, 2022; Maani *et al.*, 2022b). In other words, this alcohol industry-funded organizations do not only serve a function through their presence as seemingly distinct from industry in the wider policy environment but produce content that appears to materially differ from non-industry-funded charities and government departments, in ways consistent with the strategic objectives of the alcohol industry. Below, we outline some of the key conceptual and empiric arguments supporting these observations. In doing so, we examine the different but complementary ways in which the activities

and outputs of alcohol industry-funded organizations serve the interests of their funders from the reproduction of industry-favourable narratives based on personal responsibility and the normalization of alcohol as a consumer product to the maintenance of knowledge and policy environments conducive to the business interests of the alcohol industry and its expansion.

INDUSTRY-FUNDED ALCOHOL INFORMATION ORGANIZATIONS MAY HELP NORMALIZE DRINKING

Alcohol industry-funded health information organizations can be conceived as forming part of a complex system in which both their own initiatives and alcohol marketing are mutually reinforcing. For example, marketing is known to propagate pro-alcohol social norms, and the expansion of use in target markets, such as initiating younger drinkers (among whom alcohol use is declining) or female drinkers (Jernigan *et al.*, 2017; Noel *et al.*, 2020). School-based education campaigns wholly or in part sponsored by the alcohol industry have been found to similarly foster pro-drinking social norms through familiarization with alcohol as a product (including learning how to pour a standard drink) and promoting alcohol consumption as a normal adult activity that children should learn about and master responsible use of (van Schalkwyk *et al.*, 2022). It has been argued that the provision of such materials through third-party industry-funded alcohol information organizations provide them with a veneer of independence and facilitates their penetration into schools, an environment where direct industry funding or messaging might not otherwise be deemed publicly acceptable (Connor, 2020). In doing so, pro-alcohol norms and the industry-favoured framing of health as primarily a question of individual responsibility may be seeded at an early age in ways that complement alcohol marketing, which itself is frequently viewed by children due to its ubiquitous nature (Chambers *et al.*, 2018).

INDUSTRY-FUNDED ALCOHOL INFORMATION ORGANIZATIONS REPRODUCE INDUSTRY NARRATIVES REGARDING THE CAUSES OF ALCOHOL HARMS

There is growing evidence that the content of industry-funded alcohol information organizations differ from that of non-industry-funded charities in ways that echo industry narratives regarding the causes of harm. Compared with non-industry-funded charities, they mislead the public about alcohol and cancer risk (Petticrew *et al.*, 2018b), on alcohol harms in

pregnancy and foetal alcohol syndrome disorder specifically (Lim *et al.*, 2019) and alcohol consumption and heart disease (Peake *et al.*, 2021). In a randomized controlled trial in which online panellists were exposed to excerpts from such organizations on alcohol and breast cancer or factually correct statements from independent health organizations, industry-funded statements were associated with 58% greater odds of uncertainty about the link between alcohol and breast cancer (Maani *et al.*, 2022b). ‘Responsible drinking’ posters have also been found to increase drinking among undergraduate students (Moss *et al.*, 2015). A study of letters to the editor written on behalf of such industry-funded organizations to academic journals found that in response to such evidence, they appeared to actively seek to discredit peer-reviewed research regarding their activities (Bartlett and McCambridge, 2021), consistent with evidence from the wider commercial determinants literature (Sass, 2008).

REPRODUCING PERSONAL RESPONSIBILITY NARRATIVES

As with other forms of alcohol industry CSR (Babor and Robaina, 2013), such organizations prioritize the promotion of individual behaviour change and individual responsibility (Maani Hessari *et al.*, 2019b), with responsible consumption often defined in what have been termed strategically ambiguous ways (Smith *et al.*, 2006; Maani Hessari and Petticrew, 2018). Narratives of personal responsibility, which contradict theories and evidence on the upstream drivers of alcohol consumption, are echoed in industry evidence submissions in opposition to marketing legislation (Savell *et al.*, 2016), a demonstration of the ways in which such third-party initiatives are mutually reinforcing of more direct industry efforts to prevent regulation. A systematic review of alcohol industry CSR initiatives found no evidence that such initiatives reduce harmful drinking, but good evidence that they were used to influence the framing of alcohol-related issues in line with alcohol industry interests (Mialon and McCambridge, 2018). Such narratives of personal responsibility likely have other cumulative negative effects, such as increasing stigma among vulnerable groups (McCambridge *et al.*, 2014b) and complementing the strategies adopted by other harmful industries who seek to shift responsibility onto the public and undermine public understanding of harms and effective ways to prevent them (Michaels, 2020; Supran and Oreskes, 2021). Such activities also run counter to WHO alcohol strategy guidance which stipulates the need for member states to build public support for policy measures that act upon the upstream drivers of alcohol harm (World Health Organization, 2010).

FORMING INFORMATION ENVIRONMENTS THAT REDUCE RISK OF REGULATION

Many consumers may not be aware that the organization they are sign-posted to for ‘the facts’ in alcohol advertisements is often itself funded by the alcohol industry. A survey of Australian weekly drinkers found that only 37% were aware that DrinkWise was industry funded, compared to 84.1% who believed it received government funding (Brennan *et al.*, 2017). These organizations often claim to be independent of the alcohol industry despite their funding, but it is not clear how such independence is achieved, or how independence is defined in this context. These assertions conflict with a substantial body of evidence on the ‘funding effect’, whereby, consciously or unconsciously, results and practices tend to align with the interests of the funder (Stenius and Babor, 2010). By being sign-posted to such organizations instead of independent sources of alcohol harm information, consumers are being directed to ‘safe spaces’ for the industry, as these organizations have been found to not inform consumers about policy options to prevent alcohol harm (such as those recommended by the World Health Organization) (World Health Organization, 2010), upcoming legislation and the evidence supporting it, the role of the industry and related conflicts of interest, or information on alcohol marketing, affordability or availability more generally (Maani Hessari *et al.*, 2019b). In this way, such organizations can help the industry define the discourse surrounding alcohol problems, its causes and possible solutions (Pietracatella and Brady, 2020; Maani *et al.*, 2022a).

POLICY SUBSTITUTION

As described above, a key reason that the alcohol industry historically prioritized funding alcohol education initiatives and charities appears to be to attempt to prevent or delay population-level measures that might impact future revenue. These campaigns can help divert resources and public attention away from evidence-based measures, such as restricting access and availability. At the same time, they may give the impression that ‘something is being done’ to address alcohol harms and that the alcohol industry is part of that solution (Brown, 2015). Insofar as alcohol industry-funded educational organizations facilitate networking and partnerships, they may also normalize industry narratives and the industry presence among policy-makers, researchers and practitioners, thereby helping to shape both policy and research agendas in industry-favourable ways (Hawkins *et al.*, 2012;

Hawkins and McCambridge, 2014; McCambridge *et al.*, 2014a; Maani *et al.*, 2022a).

While scholarship on such organizations continue to grow, they remain active in health promotion activities, and the nature of their origins and strategic purpose is not obvious to policymakers or the public. Future research could further seek to engage qualitatively with the perspectives of non-industry participants in such partnerships, to ascertain their motivations, perspectives and reflections, as has been done with researchers who had chosen to work, or not, with the alcohol industry (Mitchell and McCambridge, 2022). There is growing recognition that building greater knowledge of the commercial determinants of health requires an understanding of both relationships between companies and a wide range of facilitative third-party organizations, and an understanding of the wider systems in which they operate (Gilmore *et al.*, 2023). This requires an analytical lens that moves beyond examining the individual impact of artificial intelligence activities on health, or understanding, to impacts on wider political, educational or regulatory environments, and on social norms. Alcohol industry-funded education organizations offer an example of the value of this wider lens, as they may serve a range of strategic functions.

Figure 1 describes a conceptual model of the potential wider system effects of such organizations, including shaping public understanding, displacing more effective policy options and independent charities, building coalitions and emphasizing individual responsibility, based on the framework for commercial determinants by Gilmore and colleagues (Gilmore *et al.*, 2023). These elements in turn can be viewed as affecting wider political and economic systems, regulatory approaches, sectoral public policies and physical and social environments. Beyond independently assessing the efficacy of individual campaigns or messages produced by such organizations, relatively little research has assessed these wider effects. This model is intended to aid researchers in the empirical analysis of how these organizations may serve wider commercial interests, through, for example, inputs to policy consultations, framing of harms and solutions and policy substitution. While the current article focuses on health information organizations, it is important to note that members of the alcohol industry fund a much wider range of CSR initiatives including treatment and prevention charities (Lyness and McCambridge, 2014) and community partnerships (Petticrew *et al.*, 2018a) whose system-level effects merit similar examination.

Taken together, the body of existing evidence on the history and strategic purpose of alcohol industry-funded health information organizations suggests that the wider, system-level impacts of such organizations on policy and health are likely more

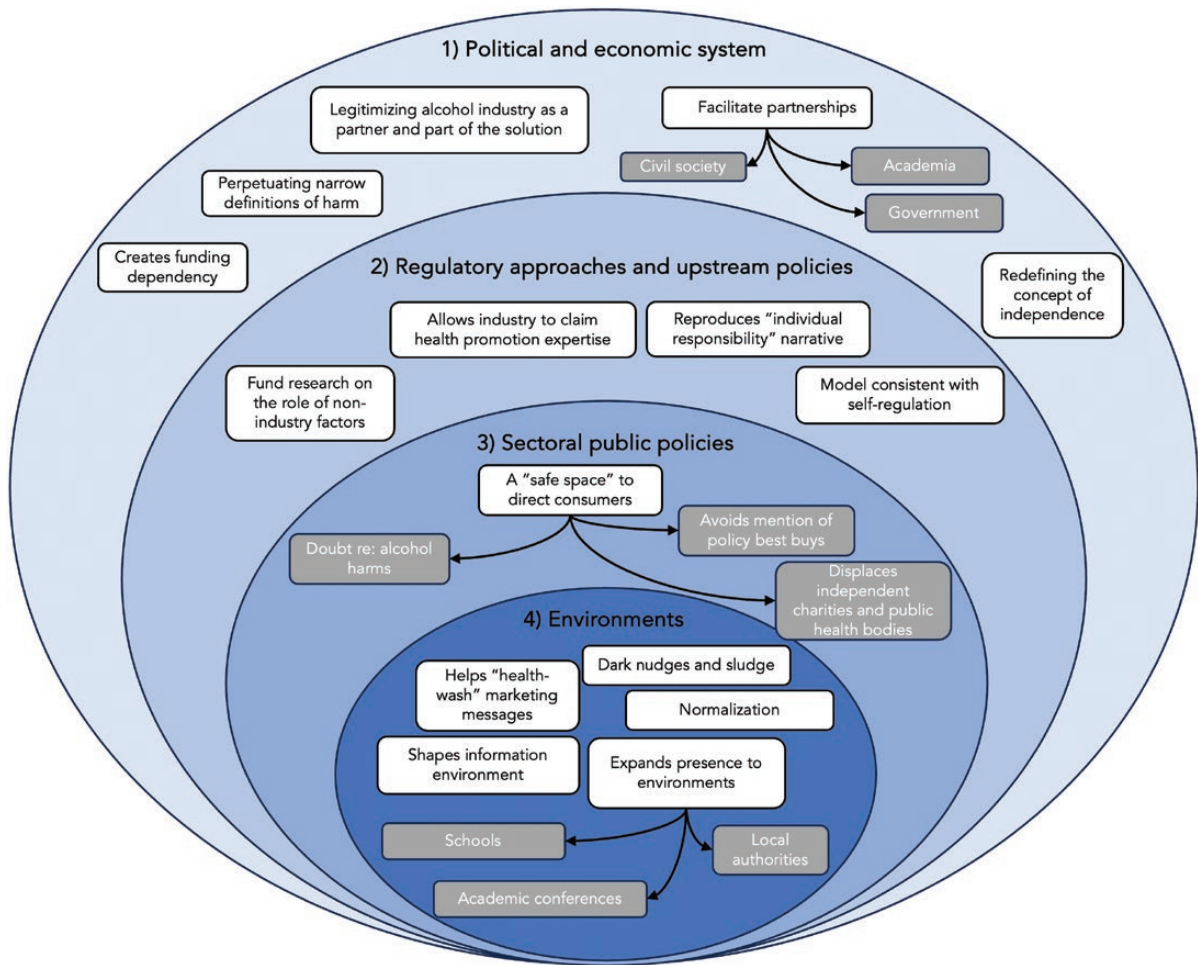


Fig. 1: A conceptual model of the wider effects of alcohol industry-funded health information organizations.

profound than previously assumed. Such structural and normative effects could include the (perhaps deliberate/planned) marginalization of important voices, such as independent alcohol charities and health experts, who might otherwise be more frequently turned to by the public and policymakers. It has been argued that the promotion of voluntary industry approaches may form part of policy substitution strategies to prevent more effective, evidence-based regulation. Through the funding of organizations that by design are focused primarily on education rather than policy, and which contain narratives regarding alcohol harms and their solutions that exclude the role of the industry, there is a risk that directing consumers to those organizations may both serve to undermine public understanding, and more broadly change how problems and solutions are framed in ways that undermine public health goals (Maani et al., 2022a).

DENORMALIZING ENGAGEMENT WITH ALCOHOL INDUSTRY-FUNDED ORGANIZATIONS

Corporate social responsibility activities such as those described above clearly can be used to serve business goals at the expense of population health, particularly where there is a fundamental conflict of interest and the alcohol industry has both a significant conflict of interest and is very active in this space. Despite this, such CSR activities have attracted relatively little regulatory attention, or rigorous independent analysis, compared to alcohol advertising and marketing, for example. Furthermore, in the context of lack of political will or government funding for health promotion campaigns, the perception that endorsing or partnering with industry CSR alternatives is 'better than nothing' should be challenged, given the real risk that industry interests rather than public health goals may be served,

and the risk that real public health harms (rising from the active displacement of accurate, independent health advice) are the result of such partnerships; misinformation about cancers, and drinking in pregnancy from such alcohol-industry funded organizations do not simply result in a misinformed public: it results in real cases of cancer, and real children with FASD, which to the industry, remain helpfully unattributable.

In summary, alcohol industry-funded health information organizations occupy strategically significant roles for their funders through their charitable status, reach and connections with policymakers. Evaluations of their output, and how consistent these effects are with the wider goals of the alcohol industry in seeking to boost consumption and undermine regulation that is needed to address a major global burden of preventable death and illness, a shift in how such organizations are engaged with by researchers, policymakers and wider society appears long overdue. Such scrutiny of current approaches to engagement is critical to fulfilling core public health principles of being evidence-based, equitable and committed to first do no harm.

FUNDING

M.P. is a co-investigator on, and both he and N.M. were funded for this work by SPECTRUM consortium which is funded by the UK Prevention Research Partnership (UKPRP), a consortium of UK funders [UKRI Research Councils: Medical Research Council (MRC), Engineering and Physical Sciences Research Council (EPSRC), Economic and Social Research Council (ESRC) and Natural Environment Research Council (NERC); Charities: British Heart Foundation, Cancer Research UK, Wellcome and The Health Foundation; Government: Scottish Government Chief Scientist Office, Health and Care Research Wales, National Institute of Health Research (NIHR) and Public Health Agency (NI)]. M.v.S. is funded by the National Institute for Health Research (NIHR) Doctoral Fellowship (NIHR3000156) and her research is also partially supported by the NIHR Applied Research Collaboration North Thames. The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

CONFLICT OF INTEREST STATEMENT

The authors declare no relevant conflicts of interest.

REFERENCES

- Anderson, P. (2003) The beverage alcohol industry's social aspects organizations: a public health warning. *Adicciones*, 15, 1376–1377.
- Au Yeung, S. L. and Lam, T. H. (2019) Unite for a framework convention for alcohol control. *The Lancet*, 393, 1778–1779.
- Babor, T. F. (2009) Alcohol research and the alcoholic beverage industry: issues, concerns and conflicts of interest. *Addiction*, 104, 34–47.
- Babor, T. F. and Robaina, K. (2013) Public health, academic medicine, and the alcohol industry's corporate social responsibility activities. *American Journal of Public Health*, 103, 206–214.
- Bakke, O. and Endal, D. (2010) Vested interests in addiction research and policy alcohol policies out of context: drinks industry supplanting government role in alcohol policies in sub-Saharan Africa. *Addiction*, 105, 22–28.
- Bartlett, A. and Mccambridge, J. (2021) Appropriating the literature: alcohol industry actors' interventions in scientific journals. *Journal of Studies on Alcohol and Drugs*, 82, 595–601.
- Brennan, E., Wakefield, M. A., Durkin, S. J., Jernigan, D. H., Dixon, H. G. and Pettigrew, S. (2017) Public awareness and misunderstanding about DrinkWise Australia: a cross-sectional survey of Australian adults. *Australian and New Zealand Journal of Public Health*, 41, 352–357.
- Brown, K. (2015) The Public Health Responsibility Deal: why alcohol industry partnerships are bad for health? *Addiction*, 110, 1227–1228.
- Chambers, T., Stanley, J., Signal, L., Pearson, A. L., Smith, M., Barr, M. *et al.* (2018) Quantifying the nature and extent of children's real-time exposure to alcohol marketing in their everyday lives using wearable cameras: children's exposure via a range of media in a range of key places. *Alcohol and Alcoholism*, 53, 626–633.
- Connor, J. (2020) Why are alcohol companies in our schools? *New Zealand Medical Journal*, 133, 7–9.
- Dumbili, E. W., Uwa-Robinson, K. and Odeigah, O. W. (2022) Making sense of 'drink responsibly' messages: explorations of the understanding and interpretations of young Nigerians who use alcohol. *International Journal on Drug Policy*, 103, 103646.
- Eck, R. H., Trangenstein, P. J., Siegel, M. and Jernigan, D. H. (2021) Company-specific revenues from underage drinking. *Journal of Studies on Alcohol and Drugs*, 82, 368–376.
- Foster, S. E., Vaughan, R. D., Foster, W. H. and Califano, J. A., Jr. (2006) Estimate of the commercial value of underage drinking and adult abusive and dependent drinking to the alcohol industry. *Archives of Pediatrics & Adolescent Medicine*, 160, 473–478.
- GBD 2019 Risk Factors Collaborators (2020) Global burden of 87 risk factors in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, 396, 1223–1249.
- Gilmore, A. B., Fabbri, A., Baum, F., Bertscher, A., Bondy, K., Chang, H. -J. *et al.* (2023) Defining and conceptualising the commercial determinants of health. *The Lancet*, 401, 1194–1213.
- Hanefeld, J., Hawkins, B., Knai, C., Hofman, K. and Petticrew, M. (2016) What the InBev merger means for health in Africa. *BMJ Global Health*, 1, e000099.
- Hawkins, B., Holden, C., Eckhardt, J. and Lee, K. (2018) Reassessing policy paradigms: a comparison of the global

- tobacco and alcohol industries. *Global Public Health*, **13**, 1–19.
- Hawkins, B., Holden, C. and Mccambridge, J. (2012) Alcohol industry influence on UK alcohol policy: a new research agenda for public health. *Crit Public Health*, **22**, 297–305.
- Hawkins, B. and Mccambridge, J. (2014) Industry actors, think tanks, and alcohol policy in the United Kingdom. *American Journal of Public Health*, **104**, 1363–1369.
- Jernigan, D., Noel, J., Landon, J., Thornton, N. and Lobstein, T. (2017) Alcohol marketing and youth alcohol consumption: a systematic review of longitudinal studies published since 2008. *Addiction*, **112**, 7–20.
- Lesch, M. and Mccambridge, J. (2022) The alcohol industry, the tobacco industry, and excise taxes in the US 1986–89: new insights from the tobacco documents. *BMC Public Health*, **22**, 946.
- Lim, A. W. Y., Van Schalkwyk, M. C. I., Maani Hessari, N. and Petticrew, M. P. (2019) Pregnancy, fertility, breast-feeding, and alcohol consumption: an analysis of framing and completeness of information disseminated by alcohol industry-funded organizations. *Journal of Studies on Alcohol and Drugs*, **80**, 524–533.
- Lyness, S. M. and Mccambridge, J. (2014) The alcohol industry, charities and policy influence in the UK. *European Journal of Public Health*, **24**, 557–561.
- Maani, N., Van Schalkwyk, M. C. I., Filippidis, F. T., Knai, C. and Petticrew, M. (2022b) Manufacturing doubt: assessing the effects of independent vs industry-sponsored messaging about the harms of fossil fuels, smoking, alcohol, and sugar sweetened beverages. *SSM - Population Health*, **17**, 101009.
- Maani, N., Van Schalkwyk, M. C., Petticrew, M. and Buse, K. (2022a) The pollution of health discourse and the need for effective counter-framing. *BMJ*, **377**, o1128.
- Maani Hessari, N., Bertscher, A., Critchlow, N., Fitzgerald, N., Knai, C., Stead, M. et al. (2019a) Recruiting the ‘heavy-using loyalists of tomorrow’: an analysis of the aims, effects and mechanisms of alcohol advertising, based on advertising industry evaluations. *International Journal of Environmental Research and Public Health*, **16**, 4092.
- Maani Hessari, N. and Petticrew, M. (2018) What does the alcohol industry mean by ‘Responsible drinking?’ A comparative analysis. *Journal of Public Health (Oxford, England)*, **40**, 90–97.
- Maani Hessari, N., Van Schalkwyk, M. C., Thomas, S. and Petticrew, M. (2019b) Alcohol industry CSR organisations: what can their twitter activity tell us about their independence and their priorities? a comparative analysis. *International Journal of Environmental Research and Public Health*, **16**, 892.
- Madureira Lima, J. and Galea, S. (2018) Corporate practices and health: a framework and mechanisms. *Globalization and Health*, **14**, 21.
- Marten, R. and Hawkins, B. (2018) Stop the toasts: the Global Fund’s disturbing new partnership. *The Lancet*, **391**, 735–736.
- Mccambridge, J., Garry, J., Kypri, K. and Hastings, G. (2022) ‘Using information to shape perception’: tobacco industry documents study of the evolution of corporate affairs in the Miller Brewing Company. *Global Health*, **18**, 52.
- Mccambridge, J., Garry, J. and Room, R. (2021) The origins and purposes of alcohol industry social aspects organizations: insights from the tobacco industry documents. *Journal of Studies on Alcohol and Drugs*, **82**, 740–751.
- Mccambridge, J., Kypri, K., Drummond, C. and Strang, J. (2014a) Alcohol harm reduction: corporate capture of a key concept. *PLoS Medicine*, **11**, e1001767.
- Mccambridge, J., Kypri, K., Miller, P., Hawkins, B. and Hastings, G. (2014b) Be aware of Drinkaware. *Addiction*, **109**, 519–524.
- Mccambridge, J., Mialon, M. and Hawkins, B. (2018) Alcohol industry involvement in policymaking: a systematic review. *Addiction*, **113**, 1571–1584.
- Mccambridge, J. and Morris, S. (2019) Comparing alcohol with tobacco indicates that it is time to move beyond tobacco exceptionalism. *European Journal of Public Health*, **29**, 200–201.
- Mialon, M. and Mccambridge, J. (2018) Alcohol industry corporate social responsibility initiatives and harmful drinking: a systematic review. *European Journal of Public Health*, **28**, 664–673.
- Michaels, D. (2020). *The Triumph of Doubt*. Oxford University Press, Oxford.
- Mitchell, G. and Mccambridge, J. (2022) The ubiquitous experience of alcohol industry involvement in science: findings from a qualitative interview study. *Journal of Studies on Alcohol and Drugs*, **83**, 260–266.
- Moss, A. C., Albery, I. P., Dyer, K. R., Frings, D., Humphreys, K., Inkelaar, T. et al. (2015) The effects of responsible drinking messages on attentional allocation and drinking behaviour. *Addictive Behaviors*, **44**, 94–101.
- Noel, J. K., Sammartino, C. J. and Rosenthal, S. R. (2020) Exposure to digital alcohol marketing and alcohol use: a systematic review. *Journal of Studies on Alcohol Drugs Supplement*, **Sup 19**(Suppl 19), 57–67.
- Peake, L., Van Schalkwyk, M. C. I., Maani, N. and Petticrew, M. (2021) Analysis of the accuracy and completeness of cardiovascular health information on alcohol industry-funded websites. *European Journal of Public Health*, **31**, 1197–1204.
- Petticrew, M., Douglas, N., D’souza, P., Shi, Y. M., Durand, M. A., Knai, C. et al. (2018a) Community alcohol partnerships with the alcohol industry: what is their purpose and are they effective in reducing alcohol harms? *Journal of Public Health (Oxford, England)*, **40**, 16–31.
- Petticrew, M., Maani Hessari, N., Knai, C. and Weiderpass, E. (2018b) How alcohol industry organisations mislead the public about alcohol and cancer. *Drug and Alcohol Review*, **37**, 293–303.
- Pietracatella, R. and Brady, D. (2020) A new development in front group strategy: the social aspects public relations organization (SAPRO). *Frontiers in Communication*, **5**.
- Sass, J. (2008) Bending science: how special interests corrupt public health research. *Environmental Health Perspectives*, **116**, A500.
- Savell, E., Fooks, G. and Gilmore, A. B. (2016) How does the alcohol industry attempt to influence marketing regulations? A systematic review. *Addiction*, **111**, 18–32.
- Smith, S. W., Atkin, C. K. and Roznowski, J. (2006) Are ‘drink responsibly’ alcohol campaigns strategically ambiguous? *Health Communication*, **20**, 1–11.
- Stenius, K. and Babor, T. F. (2010) The alcohol industry and public interest science. *Addiction*, **105**, 191–198.

- Supran, G. and Oreskes, N. (2021) Rhetoric and frame analysis of ExxonMobil's climate change communications. *One Earth*, 4, 696–719.
- Van Schalkwyk, M. C. I., Petticrew, M., Maani, N., Hawkins, B., Bonell, C., Katikireddi, S. V. *et al.* (2022) Distilling the curriculum: an analysis of alcohol industry-funded school-based youth education programmes. *PLoS One*, 17, e0259560.
- World Health Organization (2010) Global strategy to reduce the harmful use of alcohol.
- World Health Organization (2023) *Reporting about Alcohol: A Guide for Journalists*. Geneva: World Health Organization.
- World Health Organization (2022) *European Framework for Action on Alcohol, 2022–2025*. Copenhagen: World Health Organization Regional Office for Europe.