

Industrial epidemics, public health advocacy and the alcohol industry: lessons from other fields

Research on alcohol policies has now made it possible to grade strategies and interventions in terms of their effectiveness in controlling excessive alcohol use as well as alcohol-related problems [1–3]. The evidence suggests that there are a variety of effective strategies from which policy-makers can choose. Unfortunately, many popular strategies, such as designated driver programs, tend to be ineffective, and the more effective strategies, such as alcohol taxes, tend to be unpopular [4]. In persuading policy-makers to consider effective but unpopular alcohol policies, it might be instructive to frame the issue in terms of what we refer to here as ‘industrial epidemics’. This framing may be contrasted with more traditional approaches, which in the past have portrayed alcohol problems as the consequence of a moral failing, or as a chronic disease engendered by genetic, psychological and environmental causes. As this editorial will suggest, the notion of an industrial epidemic invites the application of public health concepts and shifts the policy focus from the ‘agent’ (i.e. alcohol) or the ‘host’ (e.g. the problem drinker) to the ‘disease vector’ (i.e. the alcohol industry and its associates), which in many ways is responsible for the exposure of vulnerable populations to the risks of alcohol.

INDUSTRIAL EPIDEMICS DEFINED

The concept of an epidemic associated with the commercialization of a dangerous product was first developed in the instance of tobacco [5,6]. Beatrice Majnoni d’Intignano [7–9] extended this concept to epidemics related to the consumption of commercial products (e.g. alcohol, illicit drugs, food, cars, guns). We further modified that concept to cover diseases of consumers, workers and community residents caused by industrial promotion of consumable products, job conditions and environmental pollution, respectively, and to endemic as well as epidemic conditions. In each instance, public health-oriented policies run the risk of being opposed by industrial corporations in a health versus profit trade-off. In this editorial we argue that the term ‘industrial epidemics’ applies to alcohol because alcoholic beverages are industrial products, and alcohol-related problems fit the concept of increased frequency as a marker of epidemics, whether over time, in different places, or among subgroups of particular populations [10].

There is a fundamental difference between natural epidemics and industrial epidemics. Classically, epidemics

are caused by natural agents (such as *Plasmodium falciparum*) and are driven by natural forces (such as *Anopheles* mosquitoes and ecological factors thereof) acting upon these agents. Industrial disease epidemics are driven at least in part by corporations and their allies who promote a product that is also a disease agent. The extent to which the burden of disease is attributable to the responsibility of exposed individuals, to the promotion of industrial products by corporations and to governmental control is only now coming under study [11]. In the instance of alcohol, several historical examples can be cited as illustrations. The first is the rising levels of alcohol consumption in North America following the American Revolution (1783–1830), which some have characterized as the ‘alcoholic republic’ phase of American drinking history [12]. Another example is the dramatic increase in alcohol-related mortality in Russia following the dissolution of the Soviet Union [13], which is attributable in part to the removal of controls on alcohol production and availability.

There are several ways in which corporate activity may drive an epidemic, either initially when a new product is introduced or as a secondary impetus following an endemic period. ‘Generational epidemics’ derive from the need of corporations to replenish their population of users as old cohorts die out and new cohorts of potential users are moving toward adulthood. For example, as a new generation of potential drinkers comes of age, the alcohol industry competes for the young adult market. An important research question is how much of the recent increase in heavy episodic drinking among young Europeans is due to aggressive marketing by the alcoholic beverage industry? ‘Targeted epidemics’ refer to decisions by industrial corporations to single out particular groups for increased use or consumption of its products, or for the development of new products. In the case of alcohol there is a long history of such targeted epidemics, such as the Gin Epidemic in the 18th century [14,15]. In recent times, one may cite increased use of flavored malt beverages (‘alco-pops’) [16,17] by adolescents in many countries as a targeted epidemic. Finally, ‘transnational epidemics’ are a special group of epidemics where the targets are foreign countries. Industries export their products to other countries to augment their markets or to develop new markets that are not yet saturated or subject to stringent regulations. The alcohol industry’s global corporations have expanded alcoholic beverage markets in several developing or transitional countries in the past few decades [18],



Figure 1 DOONESBURY © 2006 G. B. Trudeau. Reprinted with permission of UNIVERSAL PRESS SYNDICATE. All rights reserved

which has been associated with increasing alcohol problem rates.

Another epidemiological concept is that of endemics. In this instance the prevalence of industrial diseases is steady. Endemics are more likely to occur when corporate marketing activity maintains a high but steady human exposure to the agent and thereby facilitates associated disease(s) or social harm. In the instance of alcohol, it could be argued that such an industrial endemic has existed in some parts of the world (e.g. Europe and North America) at least since the 19th century.

Having described the relevance of the industrial disease concept to the understanding of alcohol problems, the remainder of this editorial will describe industrial activities that contribute to the initiation and perpetuation of industrial epidemics (and endemics).

INDUSTRIAL ACTIVITIES

As suggested above, the concept of industrial epidemics applies to tobacco and nicotine addiction [19], food additives and obesity [20], automobile accidents [21], lead poisoning [22,23] and diseases caused by exposure to asbestos [24], polyvinyl chloride and other chlorinated hydrocarbon plastics [23,25], beryllium [26] and diesel engine fumes [27]. The emergence of industrial epidemics often creates pressure to limit, control or regulate con-

sumption of potentially dangerous products, and at the same time conflicts may emerge between industry and public health professionals, including the scientific community. Our review of the alcohol producers [28] and other industries [9] reveals a common pattern in how industrial corporations respond to perceived threats to commercial activities linked to health problems.

Their initial responses may take several forms, ranging from silence about a health problem suspected of being linked to industrial activity [24] to the commissioning of industry-sponsored research and analysis to cast doubt on the scientific findings [29]. These activities are often carried out covertly by organizations whose links to the industry are hidden, as in Philip Morris' 'sound science and good epidemiology' campaign [30,31]. On several occasions, industrial companies have suppressed research that was unfavorable to the image of their products [19,23]. The use of 'situational science' is another tactic (see Fig. 1).

On another front, industrial corporations support organizations that emphasize the social values of the industries' products or activities [23,32]. They champion individuals' rights to make their own choices and to take health risks [19,33]. They may oppose restrictions on the advertising of unhealthy products on the basis of commercial freedom of speech [19,34]. They may represent regulatory policies as the intrusion of 'big government'

into the life of citizens [35]. They may attack specific regulatory or prevention policies as costly measures that prevent money from being spent on other more worthwhile aims, or as interventions that should be implemented by other (more permissive) governmental agencies [36]. In some instances, they may engage in libel suits against public health or media critics [19]. When the industry's initial market is compromised by effective policies or popular reactions, companies may seek other domestic markets (e.g. women and minority groups in the case of smoking), expand overseas markets (e.g. asbestos) or acquire other, less controversial, industries under cover of which they may continue their initial activities [37].

Industrial companies have several advantages in taking these actions. They often have considerable financial resources that allow them to conduct their own investigations, retain major law firms, set up public-relations organizations and threaten to file lawsuits against their critics. In some cases, they have strong links with key legislators to whom they supply needed technical information and help in being re-elected or obtaining jobs after they leave office [20]. Their experienced law firms and favorable business images often give them an advantage in lawsuits.

THE PUBLIC HEALTH RESPONSE

Based on this emerging knowledge base about the nature of industrial epidemics and the self-serving tactics of many industrial corporations, what should be the public health response? First, it is clear that the response must not be limited to measures directed solely at the behavior of the affected individuals or at the health risks of the agents. It must also be directed at the corporations themselves and at the government's authority to control exposure by limiting the supply of the agent through controls on production, delivery and availability to the individuals at risk.

Secondly, the experience with tobacco suggests that public health advocates should engage corporations in the arenas of public opinion and policy making. Public health practitioners need to deal with the doubt instilled by corporations concerning the validity of scientific evidence by demonstrating, where appropriate, the spuriousness of the industry's claims, and exposing the industry's tendency to give financial support to public relations organizations that are represented as being independent 'think tanks' or 'grass roots' advocacy groups [38]. A critical issue in the debate that often develops between public health and the industry is the need to take action in the face of scientific uncertainty. In this respect, it is important to educate the general public and policy makers about the 'precautionary principle', which states that public policy should proceed in the protection of the public, even when the scientific evidence is suggestive but not definitive [39,40].

Public health advocates also need to deal with the argument that consumers have a right to choose whether or not to use dangerous products. The free choice issue can be addressed by noting, for example, that marketing techniques directed at adolescents and young adults limit freedom of choice because of peer pressure and adolescent immaturity. Further, they might seek restriction of advertising within the confines of commercial freedom of speech legislation [34] or engage in counter-advertising. They may oppose the 'big government' criticism of regulation by showing that the same government may have given considerable support to the industry [19]. Co-optation of industry personnel [19] or joining forces with the anticorporate movement [41] may advance these approaches.

Last, but not least, public health must build a countervailing power by making alliances and coalitions with citizen groups, professional organizations, labor unions, the media and legislators who are willing to take on the industrial companies. The most powerful allies may be legal and legislative authorities willing to force the release of internal industry documents, and to require reimbursement for the cost to society of the diseases induced by its products. The power of this approach has been demonstrated with tobacco [19,42], and it can also be applied to alcohol.

IMPLICATIONS FOR ALCOHOL POLICY

Advocates for an effective public health response to the societal problems caused by alcohol must accept the fact that they are in competition with a strong industry for the support of policy makers and the public. In order to frame the issue of alcohol problems as a manifestation of an industrial epidemic, a number of steps need to be taken.

First, public health advocates should develop accurate and current knowledge of the alcoholic beverage industry's objectives and methods by monitoring the publications of the industry and its related 'social aspects' organizations [43], particularly during the developmental phase of new alcohol policies or rejection of established policies. Instruments to assess the attitudes of the public and policy makers toward alcohol policies [44–46] may be useful tools to gauge public support during the policy development process. Based on these two lines of information, targeted policy proposals can be framed to elicit public approval. For instance, framing of drinking and driving policies in the context of justice was essential to the success achieved by Mothers Against Drunk Driving in the United States [35]. Court actions in the United States might serve in some countries as a model to access alcohol industry information and to obtain compensation for health costs incurred from excessive alcohol use, as was achieved so successfully with tobacco [42].

Although industries can be partners of public health practice through their support of independent research and compliance with regulations, public health must remain vigilant. Voluntary regulation by the industry is often faulty, and industrial support of public health approaches may give companies a positive image that they can then exploit to build political support. Further, an industry may support one efficacious approach as a way to detract attention from their opposition to a more effective policy. For instance, the alcohol industry's support of measures aimed at punishing 'lager louts' is sometimes co-ordinated with their opposition to population-based approaches such as taxation [4].

The site of policy development is important. Choice between local and national policy initiatives should take into account the interactions of these two levels of government. A weak national law may limit local ability to mount a stronger policy at the municipal level. In Europe, special attention must be given to two sites of alcohol policy, the European Union and the individual countries. On the global scale, there are at least two sites for alcohol policy control: the World Trade Organization and the World Health Organization [47]. In recent years, the conceptual and legal framework of a right to health and health care has evolved to the point where it represents a broadened sense of governmental responsibility for the welfare of its citizens [48]. Failure to discourage production, marketing and consumption of alcohol products can be considered a violation of core government obligations to protect the health of its population.

Additional efforts may be needed to ensure that a successful policy is not repealed. The removal of effective policies, for example, has been associated with a resurgence of alcohol problems in Poland [49], Russia [50] and Australia [51]. In France, a total ban on the advertising of alcohol and tobacco (the Loi Evin) enacted in 1991 has repeatedly come under attack, but mobilizations of citizen groups [52] and governmental support [53] have prevented it from being repealed or significantly weakened.

Finally, the experience of other industries shows that it is important to build coalitions with community groups, non-governmental organizations, professional associations and governmental agencies in order to present the public health viewpoint in the media, and to frame the alcohol policy issue in ways that are favorable to the public health view [54]. Enlisting charismatic supporters among scientists, the entertainment industry and politicians is one of the most effective strategies.

CONCLUSION

Without a multi-faceted and co-ordinated approach that takes advantage of effective leaders, the course of industrial epidemics linked to alcohol is likely to be determined

by corporate interests rather than public health considerations. It need not happen that way. This is perhaps the most important lesson from the experience of those working in other health areas affected by industrial activity. Ultimately, the value of approaching alcohol problems within an industrial epidemic framework is that it draws attention to the 'upstream' sources of the damage [55], as opposed to attributing alcohol-related problems exclusively to the personal behavior of the individual drinker. Finally, it may be an important step in the return of public health from its 'modern version', whose effectiveness has somewhat stalled in recent years, to the classic public health approach of environmental intervention [56] that was so effective in achieving marked health improvements in the 19th and early 20th centuries.

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