The Impact of Corporate Practices on Health: Implications for Health Policy

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ABSTRACT

Although corporate practices play a substantial role in shaping health and health behavior, public health researchers have rarely systematically studied these practices as a social determinant of health. We consider case studies of three products – trans fat, a food additive and a preservative; Vioxx, a pain killer; and sports utility vehicles – to illustrate the role of corporate policies and practices in the production of health and disease and the implications for health policy. In recent years, public health advocates, researchers, and lawyers have used strategies to reduce the adverse health impact of corporate practices. Systematic analysis of these experiences yields insights that can guide the development of health policies that increase opportunities for primary prevention by discouraging harmful corporate practices.

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INTRODUCTION

Recently, policy makers, the media, advocates, and the public have called attention to the impact of corporate activities on health and disease in the United States. High-profile cases that have galvanized public discourse include the tobacco settlement that was designed to provide compensation to states for tobacco-related illness, widespread debate over the responsibility of the food and beverage industry for the current epidemic of obesity, and discussions about drug company profits and harmful product side effects. Criminal prosecutions of corporate executives have posed new questions about corporate responsibility. Controversy about corporations and corporate practices has reignited a perennial American conflict regarding appropriate roles for government and markets in political life and in public health.

Within public health, some have urged health professionals to engage corporations to improve health (1). Few public health commentators, however, have systematically examined corporate practices as social determinants of health or assessed their implications for health policy. While researchers have examined the occupational and environmental health consequences of corporate policies (2), very little work has focused on the cumulative impact of consumer exposures to corporate policies. Current interest in the role of social determinants in shaping illness and health has focused on structural characteristics such as poverty, inequality, and racism (3–5). The research that has considered the impact of corporate activity on health has usually examined the health consequences of a single product or a corporate practice rather than the patterns of behavior by corporations and governments across a variety of industries.

In our view, a systematic investigation of the impact of corporate decisions on health may yield insights that can guide prevention policy. In this review, we consider how fundamental factors such as the current relationship between markets and government influence corporate policies and in turn how these policies influence health behavior. Our primary interest is in *corporate practices*, defined as the business and political activities of corporations. These practices result from companies' decisions about the production, pricing, distribution, and promotion of their products and from their political efforts to create an environment favorable for their businesses. Our goals are to assess the role of corporate practices in determining health, examine their implications for health policy, and suggest directions for policy and research. More broadly, we hope to widen the discussion on social determinants to include corporate practices as a modifiable influence on population health.

Recent literature on social and policy determinants of health (6–11) and the authors' ongoing research (12) informs this inquiry. Corporate practices can both benefit and harm health. Changes in food production and marketing in the first part of the 20th century eliminated most malnutrition in the United States and products developed by the pharmaceutical industry have saved millions of lives, as two examples. A better understanding of what leads a company or an industry to choose health-promoting vs. health-damaging practices may help to identify new opportunities for policies that encourage primary prevention.

TRANS FATS, *VIOXX*, AND SPORTS UTILITY VEHICLES: THE IMPACT OF CORPORATE PRACTICES ON HEALTH

To understand how corporate practices influence population health, we consider three products that have attracted recent media attention.

Trans *Fats*

In 1994, the Center for Science in the Public Interest, a national advocacy organization, petitioned the Food and Drug Administration (FDA) to require that food manufacturers label the *trans* fatty acid (*trans* fat) content of their food products. The petition was based on research showing that replacing *trans* fat with healthier oils could prevent 30,000–100,000 premature cardiovascular deaths in the United States each year (13,14). Some researchers have suggested that replacing *trans* fatty acids with healthier alternatives could reduce the incidence of Type 2 diabetes in the US by as much as 40% (15,16).

Artificial *trans* fats are used to enhance the crispness, stability, and flavor of many processed foods (17). By the late 1990s, 40% of US supermarket products contained *trans* fats. When evidence of harmful effects began to emerge in the early 1990s, sectors of the food industry chose different responses. Some producers rejected the claim that *trans* fats were harmful and sought to delay any regulatory action by calling for further research (18). Throughout the 1990s, food industry groups opposed new FDA regulations on *trans* fats (19). Other companies, however, accepted the call for labeling and looked for ways to reduce the amount of *trans* fats so that their labels might show lower levels. Yet others, European food companies, moved to substitute safer ingredients for *trans* fats, demonstrating that companies might opt for health-enhancing practices (19).

In 1999, despite the opposition of the food industry, the FDA proposed to require *trans* fatty acid content on the standard food label. The agency claimed that strengthening food labeling was likely to yield significant health and economic benefits, saving as many as 5,600 lives and $8 billion a year (20). Three years later, the US Institute of Medicine could not determine a healthful limit of *trans* fat and urged action to reduce its presence in the American diet (21). In January 2006, the FDA rule requiring *trans* fats content on food labels went into effect, but the FDA turned down requests to ban the additive altogether. More recently, several cities and states have banned *trans* fats in restaurant food.

Vioxx

Merck Pharmaceuticals obtained FDA approval to market the painkiller Vioxx (generic name, rofecoxib) in 1999. Merck marketing promised that Vioxx would bring pain relief to people with arthritis without the gastrointestinal side effects associated with other medications. Five years later, after more than $10 billion in sales, Merck withdrew Vioxx from the market because a study showed that it doubled the risk of heart attacks and strokes in long-term users (22). By then, more than 20 million people had taken the drug and thousands may have experienced adverse events, including deaths, attributable to Vioxx (23).

Why did so many people take a drug that turned out to be unsafe? First, Merck benefited from a drug-testing system that relied heavily on industry studies rather than independent review – a testing regime developed at the behest of a politically powerful industry (22,23). Second, Merck invested hundreds of millions of dollars in promoting Vioxx. In 1997, after a decade of pressure by the drug industry, the FDA issued guidelines that relaxed restrictions on advertising prescription drugs directly to consumers (24). By 2001, spending by pharmaceuticals on direct-to-consumer advertising had more than doubled (24). In 6 years, Merck spent more than $500 million advertising Vioxx to consumers (23) and in 2003 alone, more than $500 million on Vioxx ads for physicians (25).

The company also developed an aggressive training program for its sales force. A training video told its sales representatives that the drug did not cause heart attacks and encouraged them to avoid questions on that topic (26). Merck's promotional campaigns and advertisements led many consumers and physicians to believe that

Vioxx and other COX-2 inhibitors (the class of drugs that includes Vioxx) were superior painkillers to much less expensive but equally effective over-the-counter alternatives (25).

Faced with mounting evidence regarding the dangers of Vioxx, the FDA adopted a policy of watchful waiting (23), despite the fact that one FDA scientist estimated that Vioxx was associated with more than 27,000 heart attacks or deaths linked to cardiac problems (27).

Finally, Merck ignored warning signs about cardiovascular side effects. Prior to FDA approval, for example, researchers discovered that COX-2 inhibitors interfere with enzymes that prevent cardiovascular disease (22). Another study in 2000 found that people taking Vioxx had three times as many cardiovascular events as those taking Naproxen, another pain reliever. Merck attributed these results to the heart-protective effects of Naproxen rather than the harmful effects of Vioxx (22). Finally, after another study showed serious cardiovascular problems in those who had taken Vioxx for more than 18 months (27), Merck pulled the drug from the market. More recently, some researchers have accused Merck of misrepresenting earlier safety trials that revealed harmful side effects associated with Vioxx use of less than 18 months (28).

Sports Utility Vehicles

From the early 1990s to 2005, sports utility vehicles (SUVs) were the best-selling and most profitable vehicles made by the US auto industry. SUVs are characterized by a pick-up truck underbody, high ground clearance, enclosed rear cargo area, and availability of four-wheel drive (29). SUVs, together with pick-up trucks and minivans, are considered "light trucks", a category that has separate safety and fuel efficiency standards than passenger cars. By 2000, light trucks accounted for 40% of US motor vehicles, double the 1980 rate (30).

SUVs pose several health and environmental problems. First, because of their high center of gravity, they are three times more likely to roll over and the rate of occupant fatalities in these rollovers is almost three times higher than for passenger cars (31). Second, because of their weight and design, SUVs are more likely than sedans to kill the occupants of cars and pedestrians they hit. An analysis of US traffic fatalities from 1995 to 2001 found that each SUV occupant fatality averted because of the greater weight comes at a cost of 4.3

additional crashes that involve deaths of car occupants, pedestrians, bicyclists, or motor cyclists (32). Third, SUVs are harder to steer, take longer to stop, and give their drivers a false sense of security that leads to riskier driving (29). Fourth, because of high fuel needs, SUVs produce more pollution than passenger cars, contributing to respiratory disease, cancer, and other conditions. SUVs also release up to 47% more CO_2 than sedans (33), thus contributing to global warming (34).

Based on a review of scientific and government reports, Bradsher estimated that SUVs account for roughly 3,000 annual excess deaths in the United States (29). Recent improvements in SUVs have reduced some hazards, although as older vehicles move into the second-hand market, characterized by riskier drivers and poorer maintenance, the SUV death toll may increase (35).

SUVs came to the US auto market through an opportunity created by an exemption from new fuel efficiency standards, won by automakers in 1975. Since then, the auto industry has used its influence in Washington to oppose changes in fuel standards for SUVs and light trucks, despite the existence of technologies that could improve their efficiency (36). From 1996 to 2000, Congress passed budgets that prohibited spending any money on fuel-economy research (29), ensuring that no new evidence would be available to set new fuel standards.

SUVs and pick-ups were the most profitable auto industry products because of trade protection against imported SUVs. Their simple design led to unit profits 10–12 times higher than for conventional cars. The auto industry, the nation's largest advertiser, also promoted SUVs heavily, spending more than $9 billion on SUV ads between 1990 and 2001 – ads wrongly suggesting that SUVs were safer than passenger cars (37). Once again, profitability trumped health, although in this case some analysts argue that US auto makers' short-term focus on profits actually harmed long-term profitability as changing economic conditions reduced the demand for SUVs (37).

HOW CORPORATE PRACTICES INFLUENCE HEALTH

These stories illustrate the ways in which specific corporate practices intended to achieve industry goals can result in actions that affect population health. Corporate managers have made decisions that have contributed to tens of thousands of preventable deaths, injuries, and illnesses. But in each case, advocacy, government regulation, and market forces ultimately reduced the threat to population health. We suggest that the systematic investigation of how companies make decisions that affect health can help identify earlier opportunities for primary prevention, thus avoiding preventable deaths.

For all three products, in the absence of safety evidence, corporate practices tried to maximize financial return. Adding *trans* fats to thousands of processed foods gave the food industry more flexibility in retail markets (e.g., longer shelf lives) while magnifying cardiovascular risk for consumers. For Vioxx and SUVs, aggressive advertising of unsafe products increased the population exposed, amplifying negative impacts on health.

In each case, industries conducted extensive public relations and lobbying campaigns, and went to court to defeat or delay government regulation, extending both the period of profitability and adverse health impacts. Finally, Ford, General Motors, Merck, and major food companies paid scientists to conduct research to support their positions, contributing to doubt about the evidence that many public health experts believed justified regulation to protect health.

If *trans* fat, Vioxx, and SUVs were aberrations, they would be alarming but less worthy of analysis. Recent scientific and popular work suggests, however, that corporations regularly make decisions that adversely affect health and that their practices have a substantial impact on US mortality and morbidity (21,29,38–42). For example, the tobacco and alcohol industries target advertising at young people and heavy users, increasing the harm to health (43,44). The food industry modifies its products by increasing portion size (45) and adding sweeteners and fats, (46,47) contributing to obesity and diabetes. The tobacco, automobile, and firearm industries make campaign contributions, lobby, and go to court to prevent the government from passing stricter safety standards for their products (36,48,49).

The role of corporations in our daily lives and in the governance of the United States has increased. Between the 1992 and 2004 elections, campaign contributions from the pharmaceutical and the food and beverage industries doubled (50). Between 1998 and 2005, food stores' spending on lobbying increased fivefold and pharmaceutical manufacturers tripled their spending (50). Since 2000, the number of registered lobbyists in Washington has doubled (51), providing corporations with increased contact with policy makers and greater opportunity to influence legislation. Between 1975 and 2001, total US spending on advertising as a percentage of gross domestic product more than doubled (52). Corporations have also penetrated more sectors of public life, for example, schools and other public places have become important sites for advertising (53), providing greater opportunities to promote health-damaging behavior.

In the political sphere, as a result of increased lobbying and campaign contributions, many areas of public health oversight have been deregulated and the staff available to monitor industry practices has been reduced (54–56). At the behest of lobbyists, 22 states have banned obesity-related liability lawsuits against fast food restaurants (57), and in its first term, the Bush Administration dropped 31 of 85 proposed auto safety rules from the National Highway and Auto Safety Administration's agenda (56).

In the personal sphere, increased advertising has doubled the number of television commercials viewed each year by the average American child, from about 20,000 in 1970 to 40,000 in 2000 (58). Advertisements for obesogenic processed foods are the most common television ads aimed at children (59). Increasingly, major corporations like McDonald's and Starbucks provide a place away from home and work where people can socialize and consume high-fat products (60).

CORPORATE PRACTICES AND THE SOCIAL PRODUCTION OF POPULATION HEALTH

In past decades, health researchers have disagreed about the most important causes of morbidity and mortality and therefore about prevention priorities. The dominant view in the United States is that individual behavior and lifestyle are the primary malleable determinants of health (61,62), suggesting that the goal of policy is to change harmful behaviors. Some US and European researchers, however, argue that social structures and the distribution of wealth and power are the fundamental causes of disease, and that changes in these factors are needed to achieve improvement in population health (10,11,63,64).

In our view, a focus on corporate behavior provides common ground for these two approaches. It suggests a policy paradigm that aims to encourage corporate practices that promote healthy behavior. As corporate practices result from specific decisions, they may be more readily changed than underlying social and economic structures in which they are embedded. They offer more immediate opportunities for health promotion than those available to change more entrenched structures. While it is true that corporations, like individuals, make decisions constrained by the social and economic context, identifying policies that make it easier for corporations to choose health should be a public health priority. Strong national standards on pollution control, for example, would make it easier for automakers to produce for the national market rather than separately meet California's more stringent requirements (36).

To shift the focus of public health policy from individual behavior to corporate practices will require an elucidation of the pathways by which corporate decisions structure the context in which individuals choose behaviors and products. To illustrate, few individuals decide, "Today, I am going to consume an extra-large portion of high fructose corn syrup" (a sweetener linked to obesity and diabetes) or "I'm going to buy a polluting vehicle more likely to kill or injure my neighbors." Rather, these choices are made in a marketplace that produces and advertises certain options and suppresses others and within a political system where certain stakeholders hold more power and influence than others.

In order to increase opportunities for primary prevention, two changes are needed: a re-conceptualization of "lifestyle" and a focused policy agenda that makes it easier for corporate managers to choose health-promoting practices.

BEYOND LIFESTYLE

Historically, health researchers have regarded lifestyle as the sum of behavioral choices in multiple arenas (e.g., diet, tobacco, physical activity), influenced by underlying personal characteristics (e.g., orientation to risk, self-efficacy) (65,66). However, sociologists from Weber on have seen lifestyle as a socially determined pattern of consumption or marker of status (67,68). By regarding lifestyle as the consequence of socially constructed choices, it is possible to identify policies that will facilitate healthier lifestyle options.

Free market proponents argue that individuals should have the right to choose what they consume without interference from a "nanny state" (69), suggesting that lifestyle choices are made in a vacuum. In fact, lifestyle choices are often the direct result of corporate decisions. No consumer ever entered a restaurant demanding a portion of *trans* fats. Rather, food companies constrain consumer options through decisions made primarily to increase profits. By exposing corporations as the the real "nannies" who persuade children to eat to obesity, drivers to find their inner id behind the wheel, or patients to solve their social problems with a new drug, health professionals can reframe the discussion about who can be trusted to look after the public's health.

Traditional market proponents have accepted that government has some right to intervene in markets: for example, to ensure that consumers have information to make informed choices, to protect vulnerable groups such as children, or to return unintended costs of a product ("externalities") from tax payers to producers. Recently, however, more ardent-free market advocates have challenged even these roles, a position some label "market fundamentalism" (70). By encouraging more discussion on these issues, health professionals may be able to reframe policy debates to lead to decisions that better protect health.

A POLICY AGENDA FOR HEALTH PROMOTING CORPORATE PRACTICES

Public health advocates have for the most part sought reforms governing corporate practices one product, company, or industry at a time. They have advocated strategies, including public education, to enable individual consumers to make more informed choices (71) and legal mandates to label products truthfully (72,73), on the premise that consumers have a right to know (74); and taxation of tobacco, alcohol, and high-calorie, low-nutrient foods (75–78) in order to make them less available. Others have suggested banning products like flavored cigarettes, designed to appeal to young people (79), or food advertisements for children (80) or requiring higher fuel and safety standards for SUVs in order to reduce their harmful impact (81).

Some advocates have switched from legislative to litigation strategies. Consumer lawsuits have targeted many corporations. Many believe that litigation is particularly effective in getting corporate attention. Beginning with the lawsuits against Big Tobacco in the 1970s, a cadre of lawyers has emerged and shared lessons from their battles against alcohol, automobile, food, gun, pharmaceutical, and tobacco industries (82–84). Public health litigators assert that courts are an important arena in which to seek justice, educate the public, win resources for health promotion, and force companies to change corporate practices by returning externalized costs to their balance sheets.

While each of these strategies has produced some significant public health advances, in the long run, this piecemeal approach seems inadequate to the task of promoting population health and realizing opportunities for primary prevention. Just as researchers and advocates in the occupational and environmental health fields have called for moving beyond regulation of a single substance at a time, often only after a body count has demonstrated damage (85,86), public health policy makers concerned about corporate practices need to consider a more comprehensive approach.

A broader agenda could serve to unify many disparate strands of current advocacy, bring together a more cohesive and powerful coalition to advocate in the political arena, and help reframe public debate in more favorable terms. Such an agenda would use language and concepts that appeal to many Americans (87,88) and provide links to other major public issues such as campaign finance and electoral reform, reduction of corporate crime, health care coverage, and consumer protection.

While the specifics of such a policy agenda can only be forged by key stakeholders – policy makers, public health professionals, advocacy organizations, and citizens – we suggest one approach in order to stimulate discussion.

1. Provide consumers with a right to know the health consequences of legal products and companies with a duty to disclose such

information. Free market ideology assumes that all parties to commercial transactions have equal information; however, in practice, "buyer beware" is a common experience. Extending the right to know and the duty to disclose to consumer products beyond the weak protections now offered could provide a legal framework for re-defining consumer rights and better balancing the obligations of government and markets. By making it more difficult for producers to externalize the health costs of their products, it might be possible to change the decision-making process by which corporate managers now opt for harmful practices.

2. Protect children and other vulnerable populations against targeted advertising that promotes unhealthy behavior. Most Americans oppose such marketing and many other free market nations restrict such practices. National legislation to protect children could encourage debate on the costs and benefits of recent efforts to extend free speech protection to commercial speech (89,90) and unify advocacy across several industries.
3. Support measures to level the political playing field. Meaningful campaign finance reform, higher ethical standards for elected officials, more stringent oversight of lobbying, and stronger voter rights will help to make it easier for public health advocates to gain electoral, legislative, or litigation support for health-promoting policies and to encourage healthier corporate practices. To date, organized public health has rarely made support of such reforms a priority.
4. Increase sanctions for deliberate distortions of science designed to protect corporate interests. Industry campaigns to withhold damaging scientific data and to create scientific uncertainty have hampered efforts to protect public health. By increasing professional, academic, and legal sanctions for such action, it may be possible to make it easier for scientists to resist such pressures.
5. Such an agenda could significantly strengthen fragmented approaches to encouraging healthier corporate practices, provide a coherent alternative to market advocates who seek to diminish the public role in health, and support the emergence of a social movement that seeks to re-define corporate responsibility (1). Such movements have been the foundation for previous public health advances.

CONCLUSION

In summary, we argue that corporate practices are an important determinant of health, and those policies that alter damaging corporate practices are likely to improve population health. In recent years, public health advocates have developed strategies to bring about policy changes, efforts often opposed by industry and its supporters. A systematic study of both these domains will inform more effective public health policy and practice. In the current political climate, these proposals may seem idealistic, even naive. In a society that seeks to protect public health, they are common sense.

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