The Interplay of Public Health Law and Industry Self-Regulation: The Case of Sugar-Sweetened Beverage Sales in Schools

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It is increasingly recognized that sugar-sweetened beverage consumption contributes to childhood obesity. Most states have adopted laws that regulate the availability of sugar-sweetened beverages in school settings. However, such policies have encountered resistance from consumer and parent groups, as well as the beverage industry.

The beverage industry's recent adoption of voluntary guidelines, which call for the curtailment of sugar-sweetened beverage sales in schools, raises the question, Is further policy intervention in this area needed, and if so, what form should it take?

We examine the interplay of public and private regulation of sugar-sweetened beverage sales in schools, by drawing on a 50-state legal and regulatory analysis and a review of industry self-regulation initiatives. (*Am J Public Health.* 2008;98: 595–604. doi:10.2105/AJPH.2006.107680)

THE CONTRIBUTORY ROLE OF the food and beverage industries to childhood obesity has come under increasing scrutiny. Policymakers have particularly fixed their sights on the beverage companies' sales and marketing activities in schools. Recent research has documented high levels of sugar-sweetened beverage consumption by children and adolescents.[1,2] Evidence from experimental and longitudinal studies shows that increases in the consumption of sugar-sweetened beverages are followed by excess weight gain.[3–5] Research has also highlighted the efforts of makers of sugar-sweetened beverages and other foods of low nutritional value to market their products to children,[6,7] the high susceptibility of young children to such campaigns,[6–9] and the complicity of many public school systems with companies' sales efforts.[10,11] There is broad consensus among public health experts that childhood overweight has become a serious public health problem,[12] and the excessive consumption of sugar-sweetened beverages is increasingly acknowledged as a major contributor.[12,13]

The question of whether and how to involve the government in addressing the problem, however, provokes controversy.[14] Efforts by state policymakers to adopt legislation or regulations that restrict the availability of sugar-sweetened beverages in schools have encountered resistance from consumer and parent groups[15] as well as the beverage industry,[16] who argue that children's food choices are a matter of personal responsibility and parental choice. They further assert that government intervention is not needed, because the beverage industry has been responsive to public concerns about consumption of sugar-sweetened beverages by children. Under guidelines adopted in May 2006, the 3 largest sellers of sugar-sweetened beverages in the United States have agreed to work with schools—on a voluntary basis—to phase out school sales by 2010.[17] In October 2006, several major food companies announced similar guidelines for sales of unhealthy snacks.[18]

The advent of these guidelines creates an opportune time to reflect on the respective roles of government and industry in preventing childhood obesity. More broadly, it highlights the dynamic interplay of public health lawmaking and industry self-regulation to address health risks. We examine public and private regulation of sugar-sweetened beverage sales in schools, by drawing on a 50-state legal and regulatory analysis.

PUBLIC REGULATION OF SUGAR-SWEETENED BEVERAGES IN SCHOOLS

Origins of Regulation

The federal government has had little meaningful involvement in regulating access to sugar-sweetened beverages in schools.[19] It has largely relied on state agencies and school authorities to regulate school foods.[20,21] Two key federal laws provide the backdrop for state and local nutrition policy.

In 1970, Congress amended the Child Nutrition Act to permit the secretary of agriculture to regulate "competitive foods"—foods and beverages sold in competition with the National School Lunch Program and National School Breakfast Program.[22] Schools sell competitive foods in cafeterias, vending machines, and other locations to expand the range of food choices and generate revenue. Under regulations promulgated by the secretary of agriculture, sales of competitive foods are permitted at meal times at the discretion of state and local authorities, if (1) all sales revenue accrues to the benefit of the school, and (2) state and local authorities prohibit the sale of "foods of minimal nutritional value" in the food service areas during meal periods.[23]

The latter condition, coupled with the secretary's designation of "soda water" and certain sweets as foods of minimal nutritional value, prompted a legal challenge in 1983 by the National Soft Drink Association. The court affirmed the designation of soda water in this category but ruled that the secretary lacked authority to promulgate time-and-place restrictions on competitive food sales.[24] Although a number of federal bills have attempted to increase the secretary's authority in this area or impose further legislative restrictions on the sale of foods of minimal nutritional value, none has been enacted.

The second piece of federal legislation is the Child Nutrition and WIC Reauthorization Act of 2004.[25] Administered by the Department of Agriculture, the act requires that local educational agencies that participate in the National School Lunch Program establish "local wellness policies" no later than the first day of the 2006–2007 school year. The law orders schools to maintain nutrition guidelines and involve the community in setting goals for nutrition education, physical activity, and student wellness promotion. These broad directives generated a flurry of activity as local educational agencies worked to draft their wellness policies with the help of state agencies.

State and local policymakers have been actively engaged in efforts to restrict students' access to competitive foods and beverages for some time. Among the earliest efforts was a 1979 California law requiring that at least 50% of all food available for sale during the school day meet nutrition standards.[26] California has continued to be an innovator in the field and recently adopted stricter mandates to regulate beverages in public schools.[27] Another pioneering state, West Virginia, adopted competitive-foods standards that were among the strongest in the country in 1993. These standards barred student access to food or drinks that contained 40% or more sugar by weight or more than 8 g of fat per ounce, and extended the restrictions to vending machines, fundraising events, and classroom parties.[28] In 2003, Arkansas became the first state to ban student-accessible vending machines in elementary schools.[29] Florida, Hawaii, and Maine have also been leaders in this area of law.[28,30]

Local school districts have proven to be active policymakers as well. Leaders include Richmond One School District in South Carolina, which prohibited the sale of foods of minimal nutritional value in 2001;[31] Los Angeles County, which banned soda sales in all 677 of its schools beginning January 2004;[32] and the Philadelphia School District, which since July 2004 has permitted only 100% juice, water, and milk for younger students and these same beverages, plus electrolyte replacement drinks, in high schools.[19]

Current State and Local Policies

In 2005, we undertook a comprehensive review of current regulatory efforts related to the sale of sugar-sweetened beverages in schools. Our aims were to describe the range of policy strategies being pursued at the state and local levels, compare legislative and administrative approaches to regulation, and make recommendations concerning promising policy strategies. Using legal search engines, state government Web sites, and other Internet research, we reviewed state bills, statutes, regulations, and other administrative actions in all 50 states and the District of Columbia from 2000 to early 2006. The box on this page lists the data sources we used. We gathered relevant polices, summarized each, and identified the major substantive and process features of the policies (e.g., beverage content restrictions and enforcement

Data Sources for Review of State Legislation and Regulation

- News articles from Nexis database and http://www.schoolpouringrights.com.
- Search of National Conference of State Legislatures Health Promotion Program State Legislation and Statute Database at http://www.ncsl.org/programs/health/phdatabase.htm, keywords "nutrition," "obesity," and "obesity—childhood"
- Robert Wood Johnson Foundation reports on "State Actions to Promote Nutrition, Increase Physical Activity and Prevent Obesity; A Legislative Overview," dated July 11, 2005 and October 3, 2005, accessed at http://www.rwjf.org/files/research/July%202005%20-%20Report.pdf and http://www.rwjf.org/files/publications/State_Obesity_Action_October_2005.pdf.
- Searches of state legislative Web sites for proposed and enacted bills, where available, and related documentation (fiscal analysis, committee reports, witness lists, etc), keywords "beverage," "vending," "nutrition," "soda," "soft drink," "school," and "education."
- Searches of Lexis databases: Lexis State Capital file (full-text bills and proposed regulations); Lexis files of current statutes and regulations for each state. Search strategy: (beverage or vending or nutrition or soda or "soft drink") within 100 words of (school or education).
- State government Web sites (Department of Education or Board of Education, Department of Health, Department of Agriculture, or equivalent agencies).
- Institute of Medicine reports relating to obesity, nutrition, and marketing to children.
- Searches of PubMed and Econlit databases for scientific studies and related commentary analyzing nutritional interventions.
- Web sites of various advocacy organizations, such as the American Beverage Association, the Center for Informed Food Choices, and the Center for Science in the Public Interest.

Key Features of State Regulatory Approaches to Sugar-Sweetened Beverage Sales in Schools

Substantive Features

1. *Content restrictions*, such as limits on certain types of beverages or beverage ingredients
2. *Portion restrictions*, such as limits on size of beverage containers or calories per serving
3. *Ratio rules* providing that either all or a percentage of beverages sold in schools must meet the content and portion standards
4. *Time and event requirements* specifying the times of day or the school events during which beverages may be sold or otherwise distributed
5. *Age or grade requirements* providing either uniform K–12 rules or varied requirements for different grade levels
6. *Marketing* provisions, including rules for beverage contracts and advertising
7. *Access to water* provisions

Process Features

1. *Multistakeholder involvement*, such as creation of advisory councils
2. *Evaluation* provisions, such as mandates for data collection
3. *Funding provisions*
4. *Pilot program*
5. *Phase-in provisions*
6. *Enforcement provisions*
7. *General balance of state and local authority*
8. *General balance of legislative and administrative authority*

mechanisms; listed on the box on this page).

We then analyzed the features of each policy and judged the policy's overall effectiveness in limiting access to sugar-sweetened beverages in schools. To do this analysis, we considered strong and weak forms of public health lawmaking, as well as any available empirical information about the policies' effectiveness. We judged the overall strength of all sweetened-beverage policies in each state by considering all policies together and focusing on the presence or absence of certain key features and the mandatory or discretionary nature of those features. We also interviewed representatives of 6 school districts that have developed local policies.

A detailed description of the study results, including information from the interviews, is presented elsewhere,[19] but several findings from the state review merit highlighting. We identified 34 states that, through legislation, regulation, or a combination thereof, had created a state policy that required or recommended that schools adopt beverage standards. We classified 5 of these states as having "strong" policies, 12 as having "moderate" policies, and 17 as having "weak" policies (Table 1). Among states with strong policies, the predominant approach was action by an administrative agency after a general legislative mandate. Moderate states tended to rely more on legislative action alone, and in the weak states, the approach was predominantly administrative action alone. Few laws contained any funding provisions, and only 1 state imposed penalties for noncompliance.

Only 6 states have eliminated all beverages that contain caloric sweeteners; most allow sports drinks and other beverages that have some such sweeteners. Most (19) restrict the size of the drink container. Eleven states require that all beverages sold in schools satisfy content and portion standards, whereas the remaining states require compliance by only a proportion of beverages offered for sale. Half the states prohibit sales of sugar-sweetened beverages during the entire school day; others exempt part of the day. Although the strongest approach would be to apply strict standards uniformly across grade levels, only 8 states do so; the other states have less-stringent standards for high schools than for younger students.

Thus, state approaches to sweetened beverage policies have been varied, but in some cases the policies are quite stringent. The beverage industry cannot have failed to notice the level of state and local government policymaking in this area and appears to have made a range of strategic responses.

INDUSTRY SELF-REGULATION

Emergence of a Regulatory Strategy

As restrictive state sugar-sweetened beverage policies began to emerge, the industry responded by continuing its historically strong lobbying efforts[33–35] and beginning to take public positions on school beverage sales. In 2002, the National Soft Drink Association issued press releases to dispute the role of sugar-sweetened beverages in childhood overweight, advocate for an increase in physical activity, and extol the "value of business–school partnerships."[36]

The following year, Coca-Cola diverged from this strategy and released Model Guidelines for School Beverage Partnerships, which called for the removal of carbonated soft drinks from elementary schools.[37] The guidelines permitted soft drink sales to older students and emphasized that the guidelines were voluntary for both schools and local bottlers. Indeed, there was no mechanism for enforcement or measuring uptake of the recommendations, and a Coca-Cola representative indicated that to find out if the guidelines were followed, one would have to check with individual bottlers (J. Pomeranz, oral communication, August 2006). Coca-Cola's adherence to the guidelines has been questioned,[35] but there is no way to confirm how many elementary schools actually removed carbonated beverages.

TABLE 1—State Policies Restricting Sugar-Sweetened Beverage Sales in Schools, 2005

	Strong State Policies					Moderate State Policies											Weak State Policies																
Substantive Policy Features	AZ	KY	NV	NM	TN	AL	CA	HI	IL	IN	LA	ME	NJ	NC	OK	TX	WV	AR	CO	CT	FL	KS	MD	MS	NB	NY	ND	OH	RI	SC	UT	VT	VA	WA
Times and events																																		
Covers entire school day	L, M	AL, M	A, M		AL, M	AL, M	L, M	A, M	A, M	L, M		A, M	A, M				L, M			A, D			A, D		A, D					A, D			A, D	
Covers meal times; some parts of school day not covered				A, M							L, M			L, M		A, M		AL, M			A, M												
Fundraising sales explicitly prohibited																																		
Fundraising allowed but explicitly limited		AL, M	A, M	A, M	AL, M	AL, M	L, M			L, M	L, M	A, M	A, M			A, M		AL, M			A, M												
Explicitly prohibited at parties, meetings, special events																																		
Allowed at parties, meetings, and special events, but explicitly limited			A, M		AL, M					L, M		A, M	A, M			A, M		AL, M			A, M												A, D	
Beverages not to be used for reward or punishment			A, M															AL, M											A, D				
Age and grade																																		
Uniform K-12 coverage		AL, M						A, M		L, M		A. M								A, D			A, D							A, D			A, D	
K-12 coverage, but standards weaken in later grades			A, M	A, M		AL, M	L, M				L, M		A, M	L, M	L, M	A, M	L, M	AL, M			A, M				A, D		A, D						
Uniform coverage K-8; no high school coverage					AL, M																													
Covers K-8, but standards weaken in later grades	AL, M								A, M																									
Covers elementary schools only																																		
Ratio																																		
All offerings must meet standards	AL, M	AL, M	A, M	A, M	AL, M							A, M			L, M								A, D				A, D			A, D			A, D	
A percentage of offerings must meet standards						AL, M	L, M	A, M		L, M	L, M		A, M	L, M		A, M	L, M	AL, M	L, D						A, D								
Healthy options must be made available, but no percentage specified															L, M					A, M	A, M												

Continued

TABLE 1—*Continued*

Substantive Policy Features	Strong State Policies					Moderate State Policies												Weak State Policies																					
	AZ	KY	NV	NM	TN	AL	CA	HI	IL	IN	LA	ME	NJ	NC	OK	TX	WV	AR	CO	CT	FL	KS	MD	MS	NB	NY	ND	OH	RI	SC	UT	VT	VA	WA				
Content																																						
Content standards limit all added sweeteners except milks		AL, M			AL, M						L, M									A, D							A, D				A, D								
Limits all added sweeteners except milk or isotonic beverages				A, M			L, M		L, D	L, M									L, D																				
Limits percentage of added sweeteners		AL, M																																					
Other content standards	AL, M		A, M			AL, M		A, M	A, M				A, M	L, M		A, M	L, M						A, D		A, D								A, D							
Portion																																							
Uniform container size limitations			A, M	A, M	AL, M					L, M	L, M	L, M		A, D				AL, M							A, D		A, D			A, D								
Container size adjusted appropriately by age and beverage	AL, M	AL, M							A, M				A, M			A, M			A, D	A, D			A, D															
Calorie limitations	AL, M			A, M	AL, M				A, M					A, D									A, D				A, D												
Marketing																																							
Limits marketing to healthy offerings						AL, M																								A, D								
New/renewed contracts must meet standards	L, M						L, M			L, M	L, M			L, M		A, M		AL, M																				
Contracts: open hearings or other dissemination of info	L, M						L, M											L, M												A, D								
Other																																							
Advisory Councils (or other multi-stakeholder involvement)	A, M	L, M	L, M	L, M	AL, M	AL, D	L, M		L, M	L, M	L, M	L, M	L, M		L, M	L, M	A, D	AL, M				L, M	A, D	L, M		L, D	A, D	AL, M	L, M	A, D, L, M	L, D	L, M	A, D, L, M	L, M				
Data collection and evaluation		AL, M	L, D	L, M	AL, M		L, M		L, M		L, M	L, M			L, M		A, M	L, M			L, M			L, M		L, D	A, D			A, D, L, M								

Note: A = standard set by agency without legislative directive; AL = standard set by agency following legislative directive; D = standard is discretionary; L = standard set by legislation; M = standard is mandatory. Where policy was discretionary and offered a range of acceptable standards, we analyzed the strongest recommended standard. Where policy provided different standards by grade level, we evaluated the standard of the highest covered grade.

[a]No policies enacted at time of review: AK, DE, DC, GA, ID, IA, MA, MI, MN, MO, MT, NH, OR, PA, SD, WI, WY

The American Beverage Association soon changed the industry's approach and cited a desire to "enhance the role of community decisionmaking over the sale of beverages in schools."[38] In August 2005, it released an industrywide school vending policy that recommended providing only water and 100% juice in elementary schools, removing nondiet soft drinks and juice drinks that contain less than 5% juice from middle schools, and stocking high school vending machines with no more than 50% soft drinks.[38] The policy was not binding on any beverage company, bottler, or school; it was billed merely as the industry's perspective on the "appropriate portfolio" of beverages in schools. There was no enforcement mechanism or mechanism for monitoring adherence. The policy also proved to be short lived.

TABLE 2—2006 Beverage Industry Voluntary Guidelines to Curtail Sales of Sugar-Sweetened Beverages in Schools Established in an Agreement Between the Alliance for a Healthier Generation and Cadbury-Schweppes, Coca-Cola, and PepsiCo

Control	Elementary School	Middle School	High School
Beverages allowed	Water	Water	Water
	Nonfat or lowfat milks	Nonfat or lowfat milks	Nonfat or lowfat milks
	100% juice	100% juice	100% juice
			Diet sodas
			Diet teas
			Flavored waters and other beverages with ≤10 calories per 8 oz
			Sports drinks with ≤66 calories per 8 oz
			"Light juices" with ≤66 calories per 8 oz
Portion limits	8 oz for milks and juice	10 oz for milks and juice	12 oz for milks, juices, and sports drinks
Other			At least 50% of beverages are water or have ≤10 calories per 8 oz

Note. 10 calories=approximately 41.9 joules; 66 calories=approximately 276.3 joules.

The 2006 Beverage Industry Guidelines

On May 3, 2006, the Alliance for a Healthier Generation (Alliance), a partnership between the William J. Clinton Foundation and the American Heart Association, announced that they had reached an agreement with Cadbury-Schweppes, Coca-Cola, and PepsiCo to curtail sales of sugar-sweetened beverages in schools. The agreement calls for the phase-out of soft drinks and many other sugar-sweetened beverages as well as limitations on portion sizes for certain other drinks (Table 2). The goal was set to implement these practices at 75% of schools by the 2008–2009 school year and 100% by 2009–2010. The agreement includes provisions for tracking and publicly reporting the extent of implementation, although there are no plans to collect data on students' actual consumption of sugar-sweetened beverages. The agreement is not intended to preempt existing law or policies or "to undermine any local initiatives to set standards or change any laws."[17]

The agreement represents a significant step forward in industry self-regulation. However, several details merit scrutiny. First, the agreement is not as restrictive as many existing state and local policies. It permits a wider range of beverages to be sold: 100% juices and, in high schools, sports drinks. Many obesity researchers have expressed concern about the contributory role of these drinks to weight gain, because they are high in sugar and are often consumed in large quantities.[39,40]

Second, the agreement does not bind the signatory companies to any specific actions other than supporting an annual analysis of the effect of the new policy. The companies pledge only to "make diligent efforts to encourage their bottlers to adopt this policy;" they do not, for example, promise to stop doing business with bottlers who decline to adopt it. The agreement also notes that many schools get their sugar-sweetened beverages from independent distributors and retail locations; here again the signatory companies promise only to try to persuade these vendors to comply with the agreement.

Third, the agreement has a long phase-in period and does not amend existing beverage contracts. Most schools have exclusive marketing contracts that can last for up to 10 years, and many districts reportedly are unable to implement the agreement, because they would have to repay hundreds of thousands of dollars to their bottlers in order to break their contracts.[41]

Fourth, the policy is voluntary for schools. Individual schools will decide whether to break or request amendments to existing vending contracts and what sort of contracts to enter into in the future. Media reports suggest that many school officials expect revenue from beverage vending machines to remain unchanged under the new guidelines because students will substitute other drinks for those that are no longer sold.[42] If this assumption proves incorrect, the long-term prospects for schools' adherence to the guidelines are unclear.

For the above reasons, private regulation alone may be insufficient to effectively curtail consumption of sugar-sweetened beverages in schools. It remains important for states and school districts to continue to address the problem through public

policymaking. State and local laws and policies will continue to control the beverage environment in schools in which the legal requirements are more stringent than the voluntary guidelines. In other jurisdictions, the laws and policies may be less restrictive than the industry guidelines but are more likely to have long-term staying power. Additionally, as we shall discuss, the industry itself may not remain committed to the agreement if pressure from public policymaking and threatened litigation decrease.

Drivers of Industry Change

The history of self-regulation by the beverage industry gives rise to several observations about the level of self-policing that the public may reasonably expect. First, the industry's preference has been to work with schools and communities to develop beverage standards, presumably to head off adoption of more-restrictive policies by communities acting alone. Second, the industry appears to strongly favor local control of school beverage policy regulations over state or federal mandates,[35] probably because it preserves greater flexibility for schools to continue to sell a range of beverages.

Third, the industry tends to act through statements of principle rather than binding commitments. By emphasizing the decentralized nature of beverage production and distribution operations, it has preserved local bottlers' autonomy to disregard its guidelines. This strategy has permitted the industry to go on record as opposing school sales of sugar-sweetened beverages without taking any affirmative steps to stop them beyond issuing the guidelines. The 2006 Alliance agreement is the first attempt to monitor policy implementation; still absent is an enforcement mechanism.

Finally, beverage companies' strategy[43–45] has differed significantly from state policymakers' approach to the problem of childhood obesity. Historically, companies' recommendations for increased physical activity to counterbalance caloric intake have tended to predominate over suggestions to reduce consumption of the companies' products,[36] and even under the Alliance agreement, some sugar-sweetened beverages will be sold to students. Again, the motivation appears to be preservation of the school market for beverages insofar as possible.

This strategy reflects beverage companies' best efforts to navigate a middle path between two strong and conflicting influences: their fiduciary obligation to maximize shareholder value by maintaining and improving their market position, and strong public and policy pressure to withdraw from schools. The Alliance agreement is billed as a proactive effort to help parents control their children's beverage choices at school[46] but likely would not have been issued if not for the mounting pressure for change.

The external pressures for industry change have been manifold. First, the profusion of state and local policymaking on school sales of sugar-sweetened beverages and foods of minimal nutritional value likely was a strong contributor to the decision to issue new guidelines.[47] In 2005 alone, 200 bills addressing soda and non-nutritious foods in schools were introduced in 42 states.[48] The industry has a business interest in warding off stronger legislation.

Second, the beverage industry has been operating under the real or perceived threat of litigation. Beginning in 2004, the Public Health Advocacy Institute and affiliated lawyers planned class action lawsuits against soft drink companies. The lawsuits alleged that it was an unfair business practice—within the meaning of state consumer protection laws—for companies to market obesogenic products to minors who are required to be in a place where they are continually tempted by them. Similar plans were underway at the nonprofit consumer advocacy organization Center for Science in the Public Interest.[49] No suits have been filed, but legal advocates claim that the industry moved in an attempt to head off this litigation or, at the very least, defuse public support for it.[50]

These organizations, along with the Center for Informed Food Choices, reportedly had been negotiating with the companies to develop agreements similar to the 2006 guidelines, because the threat of lawsuits loomed.[51] By promulgating the guidelines, beverage companies were able to create the perception of cooperation with a seemingly binding agreement. However, unlike law, regulations, or settlements reached in litigation, an agreement is not binding and requires further steps (agreement by local bottlers and individual schools) to take effect.

Third, there is some indication that the industry's willingness to reduce sales in schools was a response to shifts in the market demand for its products. A November 2005 study commissioned by the American Beverage Association found that the largest drop in beverage purchases in public schools from 2002 to 2004 was in the category of full-sugar soft drinks.[52] Sales fell by 21.6% among high school students and 34.5% among middle and elementary school students. At the same time, there were increases in sales of sports drinks (69.5%), water (22.8%), diet sodas (20.7%), and 100% juices (15.4%). In a telephone conversation, D.G. Cialante of the Coca-Cola Company confirmed that the company shifts its sales portfolio to stay in line with consumption, so the 2006 guidelines "essentially accelerated" the consumption shift that was already occurring (J. Pomeranz, oral communication, August 2006).

Finally, the public relations benefits of the industry's highly publicized deal with the Alliance were significant. The industry received positive publicity[53,54] without giving much away, because policies to restrict sales of sugar-sweetened beverages are already in place or poised to be adopted in most states and localities, and companies can still freely market to children outside of schools (where most of children's sugar-sweetened beverage

consumption occurs[55]). Further, the industry obtained an implicit seal of approval from the Alliance that the items agreed upon for school sales were safe and healthy for school-aged children, which may have helped boost sales of those products.

TABLE 3—Conceptual Model of Influences on Company Decisions to Submit to Industry Self-Regulation

Decision Influence	Definition	Components
Sales impact	Effects on the specific products and market segment targeted by the action	Lost sales of targeted products in targeted market segment
		Sales gains in substitute products in targeted market segment
		Sales gains in targeted products in other market segments (e.g., because of positive publicity and enhanced public image)
Competitive impact	Effects on the company's competitive position in the market generally	Competitors' decisions to cooperate or defect
		Effect of positive or negative publicity on sales in other market segments and product lines
Regulatory impact	Avoidance of more-burdensome regulation	Litigation avoided
		Lawmaking avoided

THE PUBLIC–PRIVATE INTERPLAY

Government regulation in the interest of public health is often justified by reference to a failure of the market to produce socially desired health behaviors and outcomes.[56] Typically, it is only when proponents of regulation can show that the industry is not behaving responsibly on its own—neither market forces nor the industry's own professional codes of ethics lead it to conform to public expectations—that lawmaking becomes politically feasible.[57]

An argument could be made that the Alliance agreement is proof that no such market failure exists concerning the sales activities of beverage companies in schools. But the accuracy of that conclusion depends on the extent to which companies and their affiliated bottlers actually implement the recommendations. This will hinge, in part, on schools' willingness to adopt the policy, but that, in turn, may depend on how aggressively the industry urges them to do so.

Whether beverage companies adhere to the agreement will also depend on how they grapple with the financial conflict of interest involved. If companies are rational economic actors, the likelihood of adherence will be determined by the expected financial effect. Specifically, adherence will be influenced by expectations of how the agreement would affect 3 types of outcomes: (1) beverage sales in schools (i.e., decreased sugar-sweetened beverage sales, increased sales of substitute beverages, and lost branding opportunities), (2) the company's competitive position (i.e., whether competitor companies will follow the policy or "defect" and seek to capture the market share of compliant companies, and whether there are perceived competitive gains associated with improved public image as a responsible company), and (3) current and future public regulation of beverage sales (i.e., the perceived likelihood that litigation or lawmaking that would be more burdensome than the voluntary guidelines would occur without compliance and can be averted through compliance; Table 3).

If these assumptions hold, then adherence to industry self-regulation will be low (and public regulation advisable) when expected sales losses outweigh expected sales gains, when companies have low confidence that their competitors will cooperate, and when companies are not operating under a threat of stricter public regulation. It seems likely that the first of these conditions is present with respect to the beverage guidelines, and the second may also be in play. Without continued pressure on the part of state and local policymakers, the third may be triggered as well. Continued policy efforts, then, remain important.

The findings of our study suggest that policies to curtail students' consumption of sugar-sweetened beverages tend to be strongest when they originate with a statewide legislative mandate and give explicit implementation responsibilities to an administrative agency. Additionally, we concluded that the most effective policies are those that prohibit sales of all beverages with caloric sweeteners (except for certain milk products), impose portion limits, apply throughout the school day, and apply to all grade levels, with age adjustments only for container sizes. The voluntary guidelines do not satisfy all of these criteria.

In summary, the relation between industry and public regulation of school sales is a dynamic one. Public health lawmaking and litigation has triggered self-regulation initiatives, and the ongoing threat of public regulation may make those initiatives more effective. The industry's guidelines, in turn, may affect policymakers' ability to legislate in this area. They may persuade some lawmakers that the problem is solved; alternatively, they may facilitate the passage of legislation because policymakers can claim that the industry agrees that restricting school beverage sales is a good thing to do.

Finally, elucidating the conditions under which voluntary guidelines are and are not likely to be followed points to potential roles for government–industry

partnerships to boost the efficacy of industry self-regulation. For example, public school systems and government agencies may be able to help companies promote more healthful product offerings, providing them with sales gains in substitute products that will soften the economic effects of complying with the guidelines.[6] Industry and government efforts to address the consumption of sugar-sweetened beverages by children have often been in tension with one another, but a thoughtful regulatory strategy could make them mutually reinforcing. ■

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M. Mello designed the study, supervised the acquisition of data, participated in the data analysis and interpretation of findings, and took the lead in writing the article. J. Pomeranz led the acquisition of data on local and industry policies and contributed important intellectual content to the article. P. Moran led the acquisition and analysis of data on state laws and contributed to writing the article.

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