

Tobacco Industry Marketing at Point of Purchase After the 1998 MSA Billboard Advertising Ban

Melanie A. Wakefield, PhD, Yvonne M. Terry-McElrath, MSA, Frank J. Chaloupka, PhD, Dianne C. Barker, MHS, Sandy J. Slater, MS, Pamela I. Clark, PhD, and Gary A. Giovino, PhD

Point-of-purchase marketing has become increasingly important for the tobacco industry in the United States.¹ In the wake of the 1998 master settlement agreement (MSA) that required tobacco advertising on billboards across the country to end on April 24, 1999, the point-of-purchase environment is likely to assume even greater importance in the industry's marketing efforts.

One goal of the billboard advertising ban (as well as other MSA advertising and promotion restrictions) was to reduce youth exposure to cigarette advertising. However, previous research suggests that the tobacco industry is able to compensate for an inability to advertise in one medium by transferring advertising dollars to other marketing activities.²⁻⁶ Accordingly, there is concern that the MSA billboard advertising ban may merely shift tobacco advertising funding to other efforts, such as point-of-purchase marketing. In this study, we used data from a unique national sample of retailers to explore changes in the point-of-purchase environment after implementation of the billboard tobacco advertising ban.

METHODS

Sample Selection

Data were obtained through the activities of ImpacTeen, a policy research partnership (supported by the Robert Wood Johnson Foundation) focused on reducing substance use among young people. The sampling strategy (described elsewhere⁷) for the 193 communities involved in the partnership was pri-

marily determined by the locations of public schools drawn as part of nationally representative samples of students in the 8th, 10th, and 12 grades in the coterminous United States.

Catchment areas (communities) reflecting the area from which each school drew the majority of its student population were defined. Up to 30 retailers in each community were randomly selected for observation; in instances in which there were fewer than 30 retailers, all were included. The final sample of retailers ($n=3553$) varied from 2 to 34 (mean=18.4) per community. Of these establishments, 36 were excluded because they did not sell tobacco, and a further 55 were excluded owing to missing covariate values; thus, analyses involved a maximum of 3462 tobacco retailers in 191 communities.

Data Collection and Analysis

Observations were conducted between February 16 and June 23, 1999. Trained field staff teams unobtrusively collected information on tobacco product placement, extent of related advertising and promotions, and prices.

Levels of store interior, store exterior, and parking lot tobacco advertising were measured with a 4-point scale ranging from *no advertising* to *advertising covering most of the store or storefront*. Prevalence of low-height (less than 3.5 ft [105 cm]) ads was noted, and the number of tobacco-related functional objects (i.e., items owned by the store, such as clocks and shopping baskets, that are labeled with a cigarette brand) was recorded. The prevalence of a variety of promotions, including multipack discounts and gifts offered with purchases, was recorded.

SAS (version 6.12) was used in conducting logistic regression analyses that attempted to determine the effect of the ban on the prevalence of store interior, store exterior, and parking lot tobacco advertising, tobacco promotions, and functional objects. Cumulative logit analyses were used to examine the relationship between ban date and extent of interior, exterior, and parking lot advertising and number of functional objects.

TABLE 1—Characteristics of Communities and Retailers

Characteristic	Retailers, % (n = 3462)
Population density	
Large city	16.3
Midsize city	11.0
Urban fringe, large city	33.0
Urban fringe, midsize city	12.7
Large/small town	15.9
Rural	11.0
Tobacco control	
States without programs	70.5
States with programs ^a	29.5
Store type	
Convenience	12.4
Convenience/gas	34.5
Gas station	7.5
Mom/pop store	3.3
Grocery store	9.1
Supermarket	9.0
Drug store	9.6
Liquor store	8.5
Tobacco store	2.0
Other	4.1
Store size, No. of cash registers	
1	61.0
2	17.2
≥3	21.7

^aArizona, California, Florida, Massachusetts, Maine, Oregon.

RESULTS

Table 1 shows characteristics of the sample. Observations were made in 1484 stores (43%) before April 24, 1999, and 1978 stores (57%) were observed on or after that date.

Table 2 indicates that, in comparison with tobacco retailers observed before the billboard ban, those observed thereafter evidenced significant increases in the prevalence of interior tobacco advertising and the prevalence and extent of exterior tobacco advertising. Highly significant increases were found in the prevalence of all 3 types of cigarette promotions and the number of tobacco-related functional objects. However, there was no significant change in the extensiveness of inte-

rior advertising, low-height advertising, or parking lot advertising.

DISCUSSION

The increases observed here in point-of-purchase marketing over a relatively short period of time probably reflect responses to changes in the tobacco marketing regulatory environment, particularly the prohibition of billboard advertising and restrictions on event sponsorships and related advertising (e.g., auto racing, concerts) after implementation of the MSA provisions. Our results are consistent with those of other research demonstrating that as long as tobacco advertising restrictions are incomplete, significant reductions in overall marketing efforts are unlikely to be achieved. This explains why only comprehensive advertising bans are associated with reductions in smoking.⁶ Point-of-purchase marketing organizations have noted that the billboard ban is expected to translate into millions of extra revenue dollars for point-of-purchase marketers.⁸

Point-of-purchase advertising increases are of particular concern to those seeking reductions in smoking among teenagers. There is growing evidence that cigarette advertising and promotions increase youth smoking^{9–15} and that youths are more responsive to such marketing than are adults.⁴ Research shows that tobacco advertising has both predisposing and reinforcing effects on youth smoking, acting as an inducement to experimentation with smoking as well as reinforcing continued progression toward regular smoking.¹² For example, one study showed that, in comparison with students who saw pictures of stores with no tobacco advertising, students exposed to photographs of stores with tobacco ads perceived that tobacco was significantly easier to acquire, believed more of their peers had tried and approved of smoking, and expressed weaker support for tobacco control policies such as advertising restrictions and cigarette price increases.¹⁶

Also, a merchant intervention study conducted in Baltimore, Md, showed that youths were more likely to attempt cigarette purchases in stores with exterior cigarette advertising depicting models who were youthful in appearance than in stores with-

out similar ads.¹⁷ In that 3 of 4 teenagers visit a convenience store at least once per week,¹⁸ these research studies suggest that the point-of-purchase environment may have important influences on youths in terms of making tobacco use seem normative and, ultimately, increasing the likelihood of smoking initiation.

In conclusion, evidence suggests that point-of-purchase advertising and promotions have increased since implementation of the MSA billboard tobacco advertising ban. These increases, at least in part, are likely to have resulted from the shifting of resources once spent on billboard advertising to other marketing efforts. As a result of this shift, the intended effect of the billboard advertising ban may not be realized, because overall exposure to advertising and promotions may not be reduced. Further research is needed to examine the impact of the billboard ban and other MSA restrictions on tobacco company marketing strategies and on youth and adult smoking. ■

About the Authors

Melanie A. Wakefield is with the Center for Behavioral Research in Cancer, Anti-Cancer Council of Victoria, Melbourne, Victoria, Australia. Yvonne M. Terry-McElrath is with the Institute for Social Research, University of Michigan, Ann Arbor. Frank J. Chaloupka and Sandy J. Slater are with the Health Research and Policy Centers, University of Illinois at Chicago. Frank J. Chaloupka is also with the Department of Economics, University of Illinois at Chicago. Dianne C. Barker is with Barker Bi-Coastal Health Consultants, Calabasas, Calif. Pamela I. Clark is with Battelle Centers for Public Health Research and Evaluation, Baltimore, Md. Gary A. Giovino is with the Department of Cancer Prevention, Epidemiology, and Biostatistics, Roswell Park Cancer Institute, Buffalo, NY.

Requests for reprints should be sent to Melanie A. Wakefield, PhD, Center for Behavioral Research in Cancer, Anti-Cancer Council of Victoria, 1 Rathdowne St, Carlton, Victoria 3053, Australia (e-mail: melanie.wakefield@cancervic.org.au).

This article was accepted March 19, 2001.

Note. The views expressed in this article are those of the authors and do not necessarily reflect the views of the Robert Wood Johnson Foundation.

Contributors

M. A. Wakefield contributed to developing the survey instruments, supervised the analysis, and wrote the article. Y. M. Terry-McElrath undertook the data analysis and contributed to the writing of the article. F. J. Chaloupka and D. C. Barker conceived the study. F. J. Chaloupka, D. C. Barker, S. J. Slater, P. I. Clark, and G. A. Giovino contributed to developing the survey instruments and analyzing the data and assisted in the writing of the article.

TABLE 2—Regression Analyses: Association of Tobacco Advertising and Promotion Variables With Date of Ban

Dependent Variable	No. of Stores	Preban, %	Postban, %	Unadjusted OR (95% CI)	P	Adjusted OR ^a (95% CI)	P
Interior ads, any vs none	3424	76.0	79.6	1.23 (1.05, 1.45)	.012	1.27 (1.06, 1.52)	.011
Interior ads	3424			1.09 (0.95, 1.25)	.210	1.08 (0.94, 1.25)	.292
Free of any ads		24.0	20.4				
Ads limited to where sold		57.5	62.1				
High levels of ads ^b		18.6	17.6				
Low-height tobacco ads	2646	44.3	43.3	0.96 (0.82, 1.12)	.592	1.02 (0.86, 1.20)	.846
Exterior ads, any vs none	3401	55.2	59.9	1.22 (1.06, 1.40)	.006	1.22 (1.03, 1.44)	.020
Exterior ads	3401			1.29 (1.13, 1.46)	.000	1.30 (1.12, 1.50)	.001
Free of any ads		44.8	40.1				
<5 ads, each <30 cm in any dimension		20.3	17.5				
High levels of ads ^c		34.9	42.4				
Parking lot ads, any vs none ^d	1421	41.1	39.8	0.95 (0.76, 1.17)	.613	1.02 (0.81, 1.27)	.877
Parking lot ads ^d	1421			1.10 (0.89, 1.35)	.396	1.19 (0.95, 1.47)	.128
Free of any ads		58.9	60.3				
<5 ads, each <30 cm in any dimension		15.6	6.2				
High levels of ads ^c		25.5	33.6				
Promotions, any vs none	3414	43.3	52.0	1.42 (1.24, 1.63)	.000	1.65 (1.42, 1.92)	.000
Promotions, specific types							
Multipack promotions, 1 or more	3424	23.4	27.1	1.22 (1.04, 1.43)	.014	1.38 (1.17, 1.64)	.000
Gift-with-purchase promotions, 1 or more	3423	3.8	8.5	2.36 (1.73, 3.23)	.000	2.51 (1.81, 3.47)	.000
Cents-off promotions, 1 or more	3415	32.3	40.4	1.43 (1.24, 1.64)	.000	1.65 (1.41, 1.92)	.000
Functional objects, any vs none	3434	65.9	72.8	1.38 (1.19, 1.60)	.000	1.63 (1.38, 1.93)	.000
Functional objects	3434			1.36 (1.20, 1.54)	.000	1.57 (1.38, 1.79)	.000
None		34.1	27.2				
1–2		33.7	33.6				
3–4		17.7	20.9				
≥5		14.6	18.2				

Note. OR = odds ratio; CI = confidence interval.

^aAdjusted for store type, number of cash registers (proxy for store size), urbanicity of community, and presence of statewide tobacco control program in April 1999.

^bCombination of “has ads in sections of the store distinctly separate from where product sold” and “has ads covering almost all available space throughout the store.”

^cCombination of “had less than 5 ads, but one or more is larger than 30 cm in any dimension” and “has 5 or more ads.”

^dIncludes only stores with parking lots (gas stations and convenience stores selling gas), n = 1454.

Acknowledgments

This research was supported by a grant from the Robert Wood Johnson Foundation to the University of Illinois at Chicago, as part of the foundation's Bridging the Gap Initiative.

We wish to thank members of the ImpacTeen Research Group for input into instrument design, Jaana Myllyluoma and the team at Battelle Centers for Public Health Research and Evaluation for data collection, and Erin Ruel for advice on data analysis.

References

1. Report to Congress for 1997, Pursuant to the Federal Cigarette Labeling and Advertising Act. Washington, DC: Federal Trade Commission; 1999.
2. Warner KE. *Selling Smoke: Cigarette Advertising and Public Health*. Washington, DC: American Public Health Association; 1986.
3. *Reducing the Health Consequences of Smoking: 25 Years of Progress. A Report of the Surgeon General*. Rockville, Md: Public Health Service; 1989.
4. Pollay RA, Siddarth S, Siegel M, et al. The last straw? Cigarette advertising and realized market shares among youth and adults, 1979–1993. *J Marketing*. 1996;60:1–16.
5. Saffer H. Economic issues in cigarette and alcohol advertising. *J Drug Issues*. 1998;28:781–793.
6. Saffer H, Chaloupka F. Tobacco advertising: economic theory and international evidence. *J Health Economics*. 2000;19:1117–1137.
7. Wakefield MA, Terry YM, Chaloupka FJ, et al. Changes at the point-of-sale for tobacco following the 1999 tobacco billboard ban. Available at: http://www.uic.edu/orgs/impacteen/pub_fs/htm. Accessed February 26, 2001.
8. *Promo Sourcebook Supplement*. Englewood, NJ: Point of Purchase Advertising Institute; 1999.
9. Pierce JP, Lee L, Gilpin EA. Smoking initiation among adolescent girls, 1988 through 1994: an association with targeted advertising. *JAMA*. 1994;271:608–611.
10. Pierce JP, Gilpin E. A historical analysis of tobacco marketing and the uptake of smoking by youth in the United States: 1890–1977. *Health Psychol*. 1995;14:1–9.
11. Feighery EC, Borzekowski DLG, Schooler C, Flora J. Seeing, wanting, owning: the relationship between receptivity to tobacco marketing and smoking susceptibility in young people. *Tob Control*. 1998;7:123–128.
12. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*. Rockville, Md: Public Health Service; 1994.

13. Pierce JP, Choi WS, Gilpin EA, Farkas AJ, Berry CC. Tobacco industry promotion of cigarettes and adolescent smoking. *JAMA*. 1998;279:511–515.
14. Biener L, Seigel M. Tobacco marketing and adolescent smoking: more support for a causal inference. *Am J Public Health*. 2000;90:407–411.
15. Schooler C, Feighery E, Flora JA. Seventh graders' self-reported exposure to cigarette marketing and its relationship to their smoking behavior. *Am J Public Health*. 1996;86:1216–1221.
16. Henriksen L, Jackson C. Reliability of children's self-reported cigarette smoking. *Addict Behav*. 1999;24:271–277.
17. Voorhees CC, Yanek LR, Stillman FA, Becker DM. Reducing cigarette sales to minors in an urban setting: issues and opportunities for merchant intervention. *Am J Prev Med*. 1998;14:138–142.
18. *The Point of Purchase Advertising Industry Fact Book*. Englewood, NJ: Point of Purchase Advertising Institute; 1992.