



*A Policy Research Partnership  
to Reduce Youth Substance Use*

## **State Variation in Retail Promotions and Advertising for Marlboro Cigarettes**

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## **Abstract**

Context: There is some evidence that tobacco companies marketing efforts undermine the effects of tobacco control programs.

Objective: To determine whether point-of-purchase advertising and promotions are more pervasive in states where comprehensive tobacco control programs are underway.

Design: Cross sectional survey, with merged records of the existence of local tobacco advertising restrictions.

Participants: 581 tobacco retail stores.

Setting: Mainland USA.

Main outcome measures: existence of gift-with-purchase, number of interior advertisements, and interior store advertisements for Marlboro cigarettes.

Results: After controlling for store type and existence of advertising restrictions, offer of a gift-with-purchase for Marlboro cigarettes was significantly more common (2.75 times more likely) in states with tobacco control programs than those without programs. There was a non-significant trend for the number of interior and exterior store advertisements to be higher for stores located in states with a tobacco control program than those in other states.

Conclusion: Point-of-purchase tobacco promotions and advertising are more pervasive in states with tobacco control programs. These efforts are likely to act against the objectives of programs and need to be accounted for in program evaluations.

## Introduction

Where statewide tobacco control programs have been launched in the United States, the tobacco industry has been an active player in seeking to delay, dilute and dismantle program implementation. [1-3] Tobacco companies have also shown themselves to be highly adaptive to restrictions placed upon their ability to advertise in some media, by increasing their expenditures on advertising and promotion in other venues. [4] In California, Pierce and colleagues documented the gradual transfer in proportional expenditure by the industry from advertising, to promotions and incentives to retailers, and discussed how this may have partly undermined the effectiveness of the California Tobacco Control Program. [5] Early analysis of tobacco industry documents, along with these developments, provides further evidence that promotional offers and advertising placement are far from some sort of random process, but are rather part of a very sophisticated strategy that aims to offset the impact tobacco control efforts. [6,7].

The point-of-purchase environment has increasingly become an important avenue for promoting cigarettes. In this study, we sought to examine the variation in advertising and promotion for cigarettes at the point-of-purchase in states with and without statewide tobacco control programs.

## Method

The data used for this study were taken from a survey of tobacco retail stores in the vicinity of high schools across the United States that was undertaken in the Spring of 1996. A two-stage sampling procedure was used to select schools. The primary sampling units were counties of the mainland United States, with 100 counties selected with probability proportional to population. In addition, 100 additional counties were selected from a sampling frame of 40 counties most populated with African Americans, 40 most populated with Hispanic Americans and 20 most populated with low income earners, as signified by a median household income value of US\$15,000 or less. Within each selected primary sampling unit, one high school was selected with probability proportional to enrolment in grades 9 through 12. In the event of school refusal, four substitute schools were drawn within each of the primary sampling units, so that they would match the selected school with respect to degree of urbanization, type and size of school, percent minority enrolment, and income level. When a selected school declined to participate in the survey, one of the four substitutes associated with that school was contacted to attempt to gain participation. At the school level, 73 percent of the schools selected as primary sample or reserve sample participated in the survey, resulting in 203 participating schools.

The schools served as the sampling location for store selection. Since Marlboro is the usual brand smoked by 60% of US teenagers who have smoked in the past 30 days, [8] we focused upon promotions and advertising for this brand. Information on Marlboro store advertising and promotions were collected from up to three different types of stores within a one-mile radius from each participating school, with the possibility to expand the

radius in the event that not all three stores were located. Store types included convenience/small grocery/delicatessen, supermarket, gas station and drug stores. Information at each store was collected from store clerks by trained field staff and included the presence of a promotion for Marlboro that offered a gift with purchase and counts of the number of Marlboro advertisements visible on the exterior of the store and inside the store. To each location, we added a variable that indicated whether there was a law placing restrictions on tobacco advertising (most often pertaining to billboards) in the county or city in which the school was located. These records were from the American Nonsmoker's Rights Foundation in San Francisco, California. In addition, we created a variable for the existence of a substantial statewide tobacco control program in the Spring of 1996, where California, Massachusetts and Arizona were denoted as having such programs, and other states were not.

Data were analyzed using SAS Version 8.0. We undertook a logistic regression analysis to examine whether the presence of Marlboro gift-with-purchase promotions was more common in stores in those states with statewide tobacco control programs. We undertook Poisson regression analyses, using a negative binomial to correct for overdispersion, to investigate whether the extent of exterior advertising and interior advertising was related to presence of the statewide tobacco control program. In all analyses, we controlled for store type, and we ran models that included and excluded the presence of restrictions on tobacco advertising.



## Results

Of the 581 stores in the sample, 130 (22.4%) were located in states with tobacco control programs. Table 1 shows the characteristics of stores in states with and without programs.

Table 2 shows that after controlling for store type, stores in states with tobacco control programs were 2.90 times more likely to have a gift-with-purchase promotion, than those in other states and that this was still significantly higher (by 2.79 times) when account was taken of the existence of laws restricting tobacco advertising. For interior advertising, there was a trend for states with programs to have counts of interior tobacco advertisements that were 24% higher on average than states without programs ( $p=.10$ ) and this did not change appreciably (25% higher) when adjustment was made for tobacco advertising laws ( $p=.13$ ). For exterior advertising, stores in program states had a 51% greater amount of advertising ( $p=.03$ ) than states without programs. The strength of this effect was attenuated when adjustment was made for the existence of advertising laws (34% higher), but still showed a trend in the predicted direction ( $p=.17$ ).

## Discussion

Our findings show that in 1996, the offer of a gift with purchase of Marlboro cigarettes was significantly more common in states with tobacco control programs and there was a

trend for exterior and interior store advertising for Marlboro to be more pervasive in these states. The pattern of findings for promotions was not explained by different laws restricting advertising in each of the communities in which stores were located. While the findings for store advertising were weakened by taking account of the existence of advertising laws, there was still a trend for both interior and exterior advertising to be more pervasive in states with programs.

This study has several limitations. First, data on promotional and advertising efforts for all other brands was not collected at the point-of-purchase, in order to reduce the time spent with store clerks and maximize accuracy of recording. Other brands, and other types of promotional efforts, such as multi-pack discounts, may not have evidenced similar state variation. Second, a maximum of only three stores was selected for observation in the vicinity of schools and it may be that sampling a greater number of stores may have given a different picture. However, these stores were those near to schools and therefore likely to be those to which children will be exposed. Finally, since the school sample was designed to be nationally representative, it may be that school locations within each state were not representative of the state as a whole. However, our method of aggregating states with and without tobacco control programs minimized this concern.

Notwithstanding these limitations, these results imply that evaluation of tobacco control programs, and efforts to measure the ‘strength’ of tobacco control efforts, [9] ought to take into account, measures of the ‘strength’ of tobacco industry marketing strategies.

Measures that apportion national expenditures on a pro-rata basis [5] will be likely to underestimate the degree of tobacco industry spending within some states with comprehensive programs and overestimate it within others without comparable programs, and may therefore understate the impact of tobacco control programs on tobacco use.

Promotional and advertising strategies at the point-of-purchase have gained greater prominence since billboard advertising was eliminated in April 1999 under the terms of the Master Settlement Agreement [10, 11]. As a result of the Supreme Court's decision earlier this year, the Food and Drug Administration's proposed marketing restrictions, including those applying to the point-of-purchase, will not be implemented. Without federal, state, or local regulation, point-of-purchase advertising and promotion are likely to become an even more important component of tobacco companies' marketing strategies.

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12. Table 1: Comparison of stores in states with and without tobacco control programs

	Stores in program States (n=130) %	Stores in non- program States (n=281) %	p
Gift with purchase	24.6	11.8	<.001
Any exterior ads	38.5	37.7	.45
<i>Mean no. exterior ads</i>	<i>1.26</i>	<i>0.97</i>	<i>.13</i>
Any interior ads	58.5	56.1	.35
<i>Mean no. interior ads</i>	<i>1.9</i>	<i>1.60</i>	<i>.14</i>
Advertising restrictions	95.4	36.6	<.001
Store type:			
Convenience store	49.2	52.8	.27
Supermarket	26.2	18.8	.05
Gas station	11.5	14.0	.29

Table 2:

Odds ratios and 95% confidence intervals for likelihood of gift with purchase and greater extent of store advertising in states with tobacco control programs, controlling for store type

	Gift with purchase <sup>a</sup>		Exterior advertising <sup>b</sup>		Interior advertising <sup>b</sup>	
	Odds ratio	95% CI	Odds ratio	95% CI	Odds ratio	95% CI
Model A (adjusting for store type)	2.90 <sup>+</sup>	(2.28-4.79)	1.51 <sup>#</sup>	(1.31-2.41)	1.24	(0.97-2.03)
Model B (adjusting for store type and advertising restrictions)	2.79 <sup>*</sup>	(2.05-4.41)	1.34	(0.93-2.02)	1.25	(0.96-2.03)

<sup>a</sup> logistic regression analysis; <sup>b</sup> poisson regression analysis

<sup>#</sup><.05; \* <.01; <sup>+</sup> <.0001

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