

26. Abrams, D. B., et al.: Saliva cotinine as a measure of smoking status in field settings. *Am J Public Health* 77: 846-848, July 1987.
27. Jacob, P., Wilson, M., and Benowitz, N. L.: Improved gas chromatographic method for the determination of nicotine and cotinine in biologic fluids. *J Chromatography* 222: 61-70, January 1981.
28. Hall, S. M., et al.: Nicotine gum and behavioral treatment in smoking cessation. *J Consult Clin Psychol* 53: 256-258, April 1985.
29. Fagerstrom, K.: Effects of nicotine chewing gum and followup appointments in physician-based smoking cessation. *Prev Med* 13: 517-527, September 1984.
30. Russel, M. A. H., Merriman, R., Stapleton, J., and Taylor, W.: Effect of nicotine chewing gum as an adjunct to general practitioner's advice against smoking. *Br Med J* 287: 1782-1785, December 1983.
31. Strecher, V. J., Rimer, B. K., and Monaco, K. D.: Development of a new self-help guide—Freedom From Smoking For You and Your Family. *Health Educ Q* 16: 101-112, spring 1989.

Tobacco Advertising in Retail Stores

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Synopsis.....

Recent studies have described tobacco advertising in the print media, on billboards, and through sponsorship of cultural and sporting events. However, little attention has been given to another common and unavoidable source of tobacco advertising, that which is encountered in retail stores. In July 1987, we conducted a survey of 61 packaged goods retail stores in Buffalo, NY, to assess the prevalence and type of point-of-sale tobacco advertising. In addition, store owners or managers were surveyed to determine their store's policy regarding tobacco advertising, receipt of monetary incentives from distributors for displaying tobacco ads, and willingness to display antitobacco ads. Six types of stores were involved in the study: 10 supermarkets, 10 privately owned grocery stores, 9 chain convenience food stores that do not sell gasoline, 11 chain convenience food stores that sell gasoline, 11 chain pharmacies, and 10 private pharmacies.

Two-thirds of the stores displayed tobacco posters, and 87 percent had promotional items advertising tobacco products, primarily cigarettes. Larger stores, and those that were privately owned, tended to display more posters and promotional items. Eighty percent of tobacco product displays were for cigarettes, 16 percent for smokeless tobacco products, and 4 percent for cigars and pipe tobacco. Convenience stores selling gasoline had the most separate tobacco product displays. Of tobacco product displays, 24 percent were located adjacent to candy and snack displays. Twenty-nine of the 61 store owners or managers indicated that their store had a policy regulating the display of tobacco ads and tobacco product displays. Policies dealt primarily with the location of tobacco posters (for example, no ads in the window) and number of product displays. Only 14 shop owners or managers indicated that they had previously displayed antitobacco information; more than half (31 of 61) said that they would be willing to display antitobacco ads.

In many stores space availability is a barrier to displaying antitobacco information. Materials should be designed that have some utility for the store, such as posters that list store hours or directional information (that is, in and out signs). Antitobacco messages could also be displayed on checkout dividers, checkout mats, shopping carts, shopping bags, and milk cartons. In chain stores, decisions regarding the display of antitobacco information are likely to be made at the corporate level. Standards encouraging retailers to adopt more responsible policies related to advertising and sale of tobacco products should be established.

CIGARETTE SMOKING is the most important preventable cause of death in the United States, yet cigarettes are one of the most heavily advertised products (1,2). A number of recent studies have attempted to identify major themes (for example, promoting smoking as fashionable or sophisticated behavior, promoting a cigarette brand as less dangerous than others) and the target groups for tobacco advertising (3-7). For the most part, these studies have concentrated on analyzing tobacco ads in the print media, on billboards, and through sponsorship of cultural and sporting events. Little attention has been given to another common and unavoidable source of tobacco advertising, that which is encountered in retail stores. In 1988, the cigarette companies spent \$223.3 million on point of sale advertising (2). In addition, tobacco product promotions such as cash rebates, coupons, contests, and premiums (t-shirts, lighters, sunglasses, and so forth) are often delivered through retail outlets.

Point of purchase advertising and promotion is an important element in the overall sales campaigns of the tobacco industry. Controlling such advertising is important for at least three reasons: (a) children are unavoidably exposed to the ads; (b) ads and promotions are easily targeted to vulnerable populations (that is, the poor, teens, minorities); and (c) the mere presence of tobacco ads in the absence of antismoking information helps to contribute to an aura of smoking as acceptable or at least "not really all that bad" (4).

Despite the obvious targeting advantage, stores that sell tobacco products have been largely ignored as a disseminator of antitobacco information. Health educators may automatically assume that retailers are not receptive to the idea of displaying antitobacco information since stores benefit financially from selling tobacco. However, educators have been successful in persuading supermarkets and restaurants to provide nutrition information to customers despite possible negative effects on sales of high profit, unhealthy food items (8-10). The crucial factor in efforts to persuade businesses to provide nutrition information was the ability to demonstrate consumer demand for such information. Similarly, many supermarkets now identify "green" or "environmentally friendly" products in response to perceived consumer demand.

Recent community based efforts aimed at retailers demonstrate the willingness of stores to respond to community pressure not to sell tobacco products illegally to minors (11). It is possible that shop

owners would provide antitobacco information to customers and limit the amount, location, and type of tobacco advertising in their stores if customer demand could be generated.

This study examines the prevalence and type of tobacco advertising found in different types of packaged goods retail stores in Buffalo, NY. In addition, information is presented from a survey of store owners or managers that assessed policies regulating instore advertising of tobacco products and willingness to display antitobacco information. The study was conducted in July 1987, and findings may provide ideas on how to limit or counter the effects of tobacco advertising in retail stores.

Methods

Six categories of packaged goods retail stores were included in the study: supermarkets, privately owned grocery stores, chain convenience food stores that do not sell gasoline, chain convenience food stores that sell gasoline, chain pharmacies, and privately owned pharmacies. Twelve stores of each type were randomly selected from the Buffalo area telephone directory's yellow pages.

Each establishment was visited by one of six trained interviewers. Stores were visited between 12 pm and 5 pm since a pretest had revealed that this was likely to be the least busy time. In each shop, the owners or managers were approached and informed of the purpose of the study, asked to participate in a brief interview, and to permit the interviewer to survey their store for tobacco ads and promotional items. If the owner or manager refused to participate in the survey, the store was dropped from the study.

Surveys were completed in 61 of 72 stores (85 percent). Six store owners or managers refused to participate, and five stores had moved or gone out of business, thus eliminating them from the study. Among owners or managers who refused to participate, one was from a supermarket, one was from a private grocery store, two worked in convenience stores that sold gasoline, and two worked in privately owned pharmacies. The primary reason given for refusal was lack of time.

The interview with store owners or managers included questions about the sale of auxiliary tobacco products such as lighters, ashtrays, and quit-smoking aids, the frequency of visits from tobacco distributors, receipt of monetary incentives for displaying tobacco ads, the store's policy regarding tobacco advertising, and their willingness

Table 1. Tobacco posters, promotional items, and displays by type of store, Buffalo, NY, 1987

Display factor	Type of store						Total (N = 61)
	Supermarket (N = 10)	Private grocery store (N = 10)	Chain con- venience store (no gas) (N = 9)	Chain con- venience store (gas) (N = 11)	Chain pharmacy (N = 11)	Private pharmacy (N = 10)	
Number of stores displaying tobacco posters	9	9	8	1	8	6	41
Average number of posters	4.1	5.7	3.2	2.0	2.8	3.8	4.0
Total number of posters	37	52	29	2	22	23	165
Tobacco product advertised on posters: ¹							
Cigarettes (percent)	100	100	97	100	100	96	99
Smokeless tobacco (percent)	...	...	3	...	...	4	1
Number of stores displaying promotional items	10	9	6	11	7	10	53
Average number of promotional items	2.3	4.0	3.2	1.8	2.0	2.4	2.6
Total number of promotional items	23	36	19	20	14	24	136
Tobacco product advertised on promotional items: ¹							
Cigarettes (percent)	96	100	100	90	100	100	98
Smokeless tobacco (percent)	4	...	...	10	...	...	2
Type of promotional items:							
Mats (percent)	4	3	...	...	...	8	3
Checkout dividers (percent)	26	...	5	5	21	...	8
Calendars, store hour signs (percent)	4	14	16	...	14	8	10
Clocks, lights (percent)	35	47	37	40	36	58	43
Oversized cigarette box (percent)	30	36	37	45	29	18	32
Other (percent)	...	...	5	10	...	8	4
Number of tobacco product displays	66	42	43	86	66	61	364
Tobacco product displayed:							
Cigarettes (percent)	72	82	75	81	82	87	80
Smokeless tobacco (percent)	19	16	25	15	15	9	16
Cigars, pipe tobacco (percent)	9	2	...	4	3	4	4
Location of tobacco product displays:							
In aisles (percent)	34	...	...	10	32	7	15
At checkout counter (percent)	47	100	100	90	68	93	82
Special counter (percent)	19	...	...	...	...	...	3
Items adjacent to tobacco product displays:							
Candy, snacks (percent)	11	34	13	19	13	58	24
Magazines, newspapers (percent)	57	40	84	71	63	42	60
Health, beauty products (percent)	15	26	3	1	13	...	9
Groceries, beverages (percent)	6	...	...	4	...	...	2
Other or nothing (percent)	11	...	...	5	11	...	5

¹ No posters or promotional items for cigars or pipe tobacco.

to display antitobacco ads. Following completion of the interview with the store owner or manager, the interviewer walked through the facility and recorded the following information on advertising for cigarettes, smokeless tobacco, pipe tobacco, and cigars displayed inside the store: (a) the number, location, and type of posters, promotional items, and displays; and (b) items adjacent to tobacco displays (for example, candy and snacks, magazines and newspapers, health and beauty products). For the purposes of distinguishing posters, promotional items, and displays the following definitions were used: tobacco posters were defined

as two dimensional advertisements separate from displays of tobacco products; promotional items included three dimensional ads separate from product displays; product displays included any apparatus that contained tobacco products offered for sale.

Results

Table 1 provides information on the number, location, and type of tobacco posters, promotional items, and displays observed in retail outlets. Two-thirds of stores had tobacco posters. Nearly all

posters were for cigarettes, usually advertising a particular brand. About one-quarter of all posters also gave store hours or directional (for example, in and out) information. On average, supermarkets and privately owned grocery stores had more posters than other types of stores (4.9 versus 3.3, $P < 0.01$). Nearly all posters were displayed in the front area of stores, with most located on windows or doors.

Eighty-seven percent of retailers had promotional items advertising tobacco products, primarily cigarettes (98 percent). The most common promotional items found in stores included clocks and counter display lights, oversized cigarette boxes, calendars, and checkout dividers.

The number and type of tobacco product displays varied by type of outlet. Eighty percent of tobacco product displays were for cigarettes, 16 percent were for smokeless tobacco, and 4 percent were for cigars and pipe tobacco. On average, chain convenience stores selling gasoline had the most displays (7.8 per store) followed by supermarkets (6.6 per store), private pharmacies (6.1 per store), chain pharmacies (6.0 per store), chain convenience stores not selling gasoline (4.7 per store), and privately owned grocery stores (4.3 per store). Nearly all tobacco product displays were located at checkout counters, except in supermarkets where displays were located in aisles or at special counters in addition to checkout counters. Supermarkets were the only type of store to have special display counters for tobacco products. Sixty percent of the displays were located adjacent to newspaper and magazine displays; 24 percent were located next to candy and snack displays.

Table 2 shows the responses of store owners or managers to questions on tobacco sales and ads. All but two stores sold cigarette lighters, and about 40 percent sold ashtrays. Quit-smoking aids were sold primarily by pharmacies. Most stores were visited by a tobacco distributor once a month or more frequently. The one exception was privately owned grocery stores, where 4 of 10 were visited less often than monthly.

When questioned about their reason for selling tobacco products, the majority of owners or managers indicated that tobacco was sold primarily as a traffic builder, not for profit. Owners or managers of chain convenience stores selling gasoline, however, were more likely to report their primary reason was profit. Two-thirds of store owners or managers reported receiving monetary incentives to display tobacco ads. Those who said their store sold tobacco products mainly for profit were signif-

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icantly more likely to report receiving monetary incentives to display ads compared with those who said tobacco products were sold primarily as a traffic builder (86 percent versus 55 percent, $P < 0.05$).

Twenty-nine of the 61 stores surveyed reported having a policy concerning the display of tobacco ads. Privately owned grocery stores and pharmacies were less likely to have a policy (15 percent) compared with supermarkets (60 percent), chain convenience stores (60 percent), and chain pharmacies (73 percent). Among those with a policy, most indicated that the policy related to the location or number of ads displayed in the store, or both. In stores that were part of a corporate chain, most owners or managers reported that their store's policies were established by the parent organization.

Only 14 stores (23 percent) reported that they had previously displayed antitobacco information such as posters or pamphlets, and 8 of these were privately owned pharmacies. More than half of the store owners or managers surveyed (31 of 61) indicated that they would be willing to display antitobacco information. Those who said that their store sold tobacco products mainly for profit were less likely to indicate a willingness to display antitobacco information compared with those who indicated that tobacco products were sold primarily to bring customers into the store, although the difference was not statistically significant at the P less than 5 percent level (44 percent versus 61 percent, $P = 0.26$).

Discussion

Cigarettes are one of the most heavily advertised consumer products (2,3). Tobacco product posters

Table 2. Store managers' responses to questions on tobacco sales and advertising by type of store, Buffalo, NY, 1987

Question	Type of store						Total (N = 61)
	Supermarket (N = 10)	Private grocery store (N = 10)	Chain con- venience store (no gas) (N = 9)	Chain con- venience store (gas) (N = 11)	Chain pharmacy (N = 11)	Private pharmacy (N = 10)	
Number of stores carrying:							
Lighters	10	9	9	10	11	10	59
Ash trays	7	2	3	1	8	3	24
Quit smoking aids	4	0	2	0	4	8	18
Number of stores indicating frequency of tobacco distributor's visits:							
Weekly	1	3	2	1	4	2	13
Biweekly	3	2	0	2	0	1	8
Monthly	5	1	7	8	5	6	32
Less than monthly	1	4	0	0	2	1	8
Number of stores indicating that tobacco products are sold primarily—							
For profit	4	4	2	6	3	2	21
To build customer traffic	6	6	7	5	8	8	40
Number of stores receiving monetary incentives to display tobacco ads ...							
Number of stores with a policy on display of tobacco ads	6	1	6	6	8	2	29
Among stores with a policy, number indicated policy relates to:							
Location of ads	6	1	5	4	8	2	26
Size of ads	2	1	0	1	0	0	4
Number of ads	2	0	3	2	8	0	15
Only certain companies	1	0	2	1	1	0	5
Monetary discount	0	0	1	0	0	0	1
Number of stores that have in the past displayed antitobacco information ...							
Number of stores willing to display antitobacco information	4	7	5	3	4	8	31

'With enhanced awareness of the ubiquity of tobacco advertising in retail stores, citizen groups might be organized to establish community standards encouraging retail proprietors to adopt more responsible policies related to the advertising and sale of tobacco products.'

or promotional items were found in all stores in our survey. Despite the fact that most sold a variety of different tobacco products, nearly all tobacco posters, promotional items, and displays featured cigarettes.

The number of tobacco posters and promotional items varied by type of store, mainly as a function of store size and ownership. Larger establishments, and those that were privately owned, tended to display more posters and promotional items. De-

spite being smaller in size, convenience stores selling gasoline had the most separate tobacco product displays. Owners or managers of convenience stores selling gasoline were also more likely than owners or managers of other types of stores to indicate that they sell tobacco products primarily for profit rather than as a way of bringing customers into the store. Tobacco accounts for approximately 17 percent of total convenience store sales, a far higher proportion than other types of stores (12).

With the exception of privately owned pharmacies, few stores reported having displayed antitobacco information. Encouragingly, half the store owners or managers stated that they would consider displaying antitobacco information in their store if asked. The owners or managers of convenience stores and chain pharmacies were the most reluctant to consider displaying antitobacco information. This attitude may reflect the fact that such decisions are made at a corporate level and not by store managers. Privately owned grocery stores and

pharmacies were the most receptive to the idea of displaying antitobacco information.

Since space availability in stores is likely to be a barrier to the display of such information, health educators should consider designing materials that have some utility for the proprietor. For example, antismoking messages could be displayed on posters that allow the store to list hours or provide directional information (that is, in and out signs). Antitobacco messages could also be displayed on checkout dividers, checkout mats, shopping carts, shopping bags, and milk cartons.

Twenty-nine of the 61 stores surveyed had a policy relating to the display of tobacco ads and product displays. Policies dealt primarily with the location of tobacco posters (for example, only at a front counter, no ads in window) and the number of product displays. No store had a policy that addressed the imagery in tobacco advertising or the placement of product displays adjacent to candy and snack items sold in the store. Only 1 of the 61 stores surveyed had a sign posted, as required by New York State law, stating that it is illegal to sell tobacco products to anyone under 18 years of age.

It is reasonable to consider establishing guidelines for responsible advertising of tobacco products in retail outlets. Such guidelines might limit ads to a "tombstone" format, restrict the location of product displays so that they are not accessible to children (that is, behind the counter and away from candy and snack items), limit participation in promotions, ban the sale of related nontobacco products (for example, candy cigarettes, toys) that might appeal to children, and encourage stores to display anti-tobacco information.

Guidelines restricting the placement of tobacco and liquor billboards were recently adopted by the Outdoor Advertising Association of America in response to pressure from citizen groups (13). With enhanced awareness of the ubiquity of tobacco

advertising in retail stores, citizen groups might be organized to establish community standards encouraging retail proprietors to adopt more responsible policies related to the advertising and sale of tobacco products.

References

1. Office on Smoking and Health: Reducing the health consequences of smoking: 25 years of progress. A report of the Surgeon General. DHHS Publication No. (CDC) 89-8411, Centers for Disease Control and Center for Chronic Disease Prevention and Health Promotion, 1989.
2. Cigarette advertising—United States, 1988. *MMWR* 39: 261-265, Apr. 27, 1990.
3. Davis, R. M.: Current trends in cigarette advertising and marketing. *New Engl J Med* 316: 725-732, Mar. 19, 1987.
4. Warner, K. E. Selling smoke: cigarette advertising and public health. American Public Health Association, Washington, DC, 1986.
5. Ledwith, F.: Does tobacco sports sponsorship on television act as advertising to children? *Health Educ J* 43: 85-88 (1984).
6. McMahan, E. T., and Taylor, P. A.: Citizens' action handbook on alcohol and tobacco billboard advertising. Scenic America, Washington, DC, 1990.
7. Cummings, K. M., Giovino, G., and Mendicina, A. J.: Cigarette advertising and black-white differences in brand preference. *Public Health Rep* 102: 698-701, November-December 1987.
8. Davis-Chervin, D., Rogert, T., and Clark M.: Influencing food selection with point-of-choice nutrition information. *J Nutr Educ* 17: 18-22 (1985).
9. Glanz, K., and Mullis, R. M.: Environmental interventions to promote healthy eating: a review of models, programs, and evidence. *Health Educ Q* 15: 395-415 (1988).
10. Albright, C. L., Flora, J. A., and Fortmann, S. P.: Restaurant menu labeling: impact of nutrition information on entree sales and patron attitudes. *Health Educ Q* 17: 157-167 (1990).
11. Altman, D. E., Foster, V., Ragenick-Douss, L., and Tye, J. B.: Reducing the illegal sale of cigarettes to minors. *JAMA* 261: 80-83, Jan. 6, 1989.
12. Rethinking the convenience store. *New York Times*, Sunday, Oct. 8, 1989, sect 3, Business, p. 1.
13. Fahey, A.: Outdoor sets limits. *Advertising Age*, June 25, 1990, p. 57.