Brief Report

Smokeless Tobacco Marketing and Sales Practices in Appalachian Ohio Following Federal Regulations

Elizabeth G. Klein, Ph.D., M.P.H.,¹ Amy K. Ferketich, Ph.D.,¹ Mahmoud Abdel-Rasoul, M.P.H.,¹ Mei-Po Kwan, Ph.D.,² Loren Kenda, M.A.,² & Mary Ellen Wewers, Ph.D., M.P.H.¹

¹ College of Public Health, Ohio State University, Columbus, OH

² College of Social and Behavioral Sciences, Ohio State University, Columbus, OH

Corresponding Author: Elizabeth G. Klein, Ph.D., M.P.H., Health Behavior & Health Promotion, Ohio State University College of Public Health, 1841 Neil Avenue, Columbus, OH 43210; E-mail: eklein@cph.osu.edu

Received May 31, 2011; accepted September 22, 2011

Abstract

Introduction: Smokeless tobacco (ST) use is increasingly prevalent among poor and vulnerable groups, especially rural males. Access to tobacco products, as well as marketing messages, is associated with tobacco usage. In June 2010, the Tobacco Control Act (TCA) marked the beginning of federal regulation of the sale and marketing of tobacco products—including ST. The goal of this study was to describe marketing practices over time and to provide early assessment of the federal regulation in rural tobacco-licensed retail outlets.

Methods: Observational data were collected from a sample of retail outlets within three Ohio Appalachian counties. From an estimated 300 retail establishments, a stratified random sample was drawn ($n = 86$). Trained observers surveyed the sales and marketing of tobacco products. Baseline surveys were conducted between November 2009 and May 2010 before the TCA; follow-up surveys were repeated in August 2010.

Results: Follow-up surveys were completed for 79 tobacco-licensed retail outlets. The majority of retail outlets were gas stations or convenience stores. Compared with baseline, there was a significant reduction in the frequency of exterior and interior advertisements observed after the TCA ($p < .01$). Despite the lack of change in the proportion of stores advertising ST, the number of ST brands being advertised doubled between baseline and follow-up.

Conclusion: Initial compliance with certain elements of the federal restrictions appears to be high in Appalachian Ohio. The significant increase in ST brands advertised suggests that advertising remains a clear presence in retail outlets in Appalachian Ohio.

Introduction

Smokeless tobacco (ST) products, including chewing tobacco, moist and dry snuff, have been demonstrated to cause deleterious

health effects (Boffetta, Hecht, Gray, Gupta, & Straif, 2008). Although the population prevalence of current ST use is substantially lower than cigarettes among adults (3.2% vs. 20.6%), studies have shown that ST usage is higher among certain adult demographic groups, including men, young adults, rural residents, Whites or American Indians/Alaskan Natives, and persons with lower levels of education (Centers for Disease Control and Prevention, 2010; Nelson et al., 2006). In Ohio, Appalachian males have the highest prevalence of current use—10%—compared with 7% among rural non-Appalachian men, which is comparable with current use nationally (Ferketich, 2011; Substance Abuse and Mental Health Services Administration, 2010). In addition, ST usage is being marketed to smokers as an alternative to cigarettes. (Hatsukami, Ebbert, Feuer, Stepanov, & Hecht, 2007).

The Food and Drug Administration (2010) included ST products in the 2009 Family Smoking Prevention and Tobacco Control Act (i.e., the TCA) that went into effect June 22, 2010, with the intended goal of discouraging youth from using tobacco products. This federal regulation pertains to the content, marketing, and sale of tobacco products, including cigarettes and ST, beyond the historic marketing restrictions on cigarettes achieved through the 1998 Master Settlement Agreement (MSA) and Smokeless MSA which prohibited outdoor advertisements, event sponsorship, and brand names on merchandise (National Association of Attorneys General, 1998; U.S. Tobacco Company, 1998). The TCA imposed additional marketing and sales restrictions: requiring face-to-face product sales (prohibiting vending machines or self-service displays except in adult-only facilities), banning flavorings added to cigarettes, and banning the sales or distribution of brand-identified promotional nontobacco items.

Marketing strategies for ST products evolved following the MSA, including an increase in tobacco advertising in retail outlets, particularly in rural areas (Ruel et al., 2004). Since the MSA, spending on advertisement continues to rise. In 2006, the five major manufacturers of ST spent a total of \$354.1 million on advertising and product promotion, up \$100 million from 2005 (Federal Trade Commission, 2009). The majority (57%) of annual marketing spending was allocated to price discounts

doi:10.1093/ntr/ntr243

Advance Access Published on February 7, 2012

© The Author 2012. Published by Oxford University Press on behalf of the Society for Research on Nicotine and Tobacco. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com

paid directly to retailers to reduce the price of ST to consumers (Federal Trade Commission, 2009). The retail outlet point-of-purchase advertisements are crucial tobacco industry marketing strategies detailed in internal documents (Lavack & Toth, 2006); these tactics require monitoring of tobacco industry response to new federal regulation.

Compliance with the TCA at tobacco-licensed retail outlets has yet to be assessed; monitoring of these regulatory efforts will assist policymakers to determine their impact. The aims of the current study was to evaluate early compliance with specific ST marketing and sales practices prohibited by the TCA within tobacco-licensed retail outlets and to describe trends in select marketing practices within retail outlets over time in three Ohio Appalachian counties.

Methods

Sampling

Three rural Appalachian Ohio counties were selected for inclusion in the study; communities ranged in size from 64,000 to 85,000 residents. All counties were socioeconomically disadvantaged compared with the rest of Ohio. All retail outlets in Ohio must be licensed to sell tobacco products; the 2009 census of tobacco-licensed retail outlets was obtained from each county auditor ($n = 292$). Within each county, three strata were drawn by population distribution and geography to sample retail outlets within higher and lower density areas. Using proportional allocation, a total sample of retail outlets was identified ($n = 86$) using sampling with replacement to allow for substitution in the case of businesses closure, business addresses errors, the inability to locate the business, or safety concerns. A minimum sample size of 80 outlets was determined to have sufficient statistical power for the proposed analyses.

Data Collection

The baseline study period was from October 2009 to May 2010, with follow-up data collection attempted in August 2010 for outlets with complete baseline data. All data collectors were trained by research personnel (MEW and EGK) to complete the data collection instruction—referred to as a “checklist.” Similar to work done by Cohen et al. (2008), data collectors observed the exterior and interior of each retail outlet. The frequency and placements of advertisements as well as tobacco products in tobacco-licensed retail outlets were observed and subsequently recorded on a standardized checklist immediately after leaving the retail outlet. Institutional Review Board approval was obtained from Ohio State University.

Measures

As noted, the checklist was modified from previous research done by Cohen et al. (2008), where tobacco retail outlets in Ontario, Canada were studied. Information was collected to describe the tobacco-licensed retail outlets, including the type of store (tobacco-specific outlet, convenience, grocery, or drug store), the presence of a drive-through window for tobacco sales, presence of youth access signage, and neighborhood description (residential, commercial, interstate, or industrial). The intention of the checklist was to characterize the exposure to tobacco marketing, through advertisement and sales practices, within retail outlets.

For the outdoor environment, the checklist included the number (total count) of ST advertisements on the retail outlet property (referred to as “on-site”) as well as on the retail outlet building. For indoor advertisements, information was gathered on the presence of any ST ads (yes/no), listing all ST brands advertised, the number of functional items (defined as any in-store item not for sale that is ST branded, such as mirrors, clocks, change cups, etc.), and presence of illuminated cigarette or ST ads (yes/no). Advertisements were evaluated as decals attached to the floor or counter bearing ST brands (yes/no), for whether any were illuminated (yes/no for either cigarette or ST brands), advertising messages regarding free products with purchase, a “special price” for ST products, or any reference to coupons (yes/no for all). Advertising of any sort for tobacco cessation aids was also collected (yes/no). Data were collected about the sales practices of tobacco products, including sales of cigars, flavored cigarettes or cigars, loose cigarettes, or whether there was self-service access to either cigarettes or ST without requiring the assistance of the sales clerk to access the product (yes/no for all).

Data analyses

Description of the type and location features for the sampled retail outlets was described using percentages. Statistical analyses were conducted in order to compare changes in advertising and sales practices before and after the TCA using paired t tests and chi-square statistics, using $p < .05$ as the cutoff for statistical significance. Analyses were completed using SAS 9.2 (SAS Institute, 2008).

Results

At baseline, 86 store observations were completed (see Table 1), in mostly gas stations or convenience stores (59%). Locations included business districts (56%), rural/interstate areas (22%), residential (21%), and industrial (1%) areas, and few were located near schools ($n = 2$). Of the sampled retail outlets, only

Table 1. Descriptive Features of Licensed Tobacco Retailers in Three Appalachian Ohio Counties

Baseline sample description ($n = 86$)	% (n)
Type of store	
Gas station/convenience stores	59.2 (51)
Grocery store	16.3 (14)
Drug store/pharmacy	8.1 (7)
Tobacco or liquor store only	9.4 (8)
Bar, restaurant, or general store	7.0 (6)
Store has a drive-through where tobacco is sold	5.8 (5)
Youth access signage	91.9 (79)
Neighborhood description	
Business/commercial	55.8 (48)
Residential	20.9 (18)
Rural/Interstate	22.1 (19)
Industrial	1.2 (1)
School visible from outlet location	2.4 (2)

2% had discontinued the sales of tobacco products at the time of baseline data collection ($n = 2$).

At follow-up, data collection was completed in 92% of the original sample ($n = 79$); incomplete observations ($n = 7$) were due to business closure, no longer selling tobacco products, accessibility, or safety concerns. Table 2 presents exterior and interior ST advertising and sales practices observed at the sampled tobacco-licensed retail outlets between baseline and follow-up. Compared with baseline, there was a statistically significant reduction at follow-up in the mean number of ST ads on-site, on-building, as well as in the store interior ($p < .05$ for all, respectively) at follow-up. Inside the store, there was a nonsignificant change in proportion of retail outlets with any interior ST advertisements (77%–76%, $p < .77$), but the mean number

of ST brands being advertised in any form doubled from 3.3 at baseline to 6.6 at follow-up ($p < .01$); the most prevalent ST brands at baseline and follow-up are listed. The mean number of functional items significantly decreased after the TCA.

A selection of sales and advertising practices were also evaluated (shown in Table 2). Illuminated advertisements for ST and cigarette brand were observed at baseline, but none were visible at follow-up. Advertisements offering free ST products with purchase or with a coupon toward the next purchase remained statistically unchanged between baseline and follow-up. At baseline, seven retail outlets (8%) were observed to have ST-branded decals on the counter and only one had an ST-branded floor decal (1%); at follow-up, neither counter nor floor ST-branded decals were observed. With regard to sales practices, self-service of tobacco decreased from 31% to 3% for ST products and from 12% to 7% for cigarettes after the TCA. The proportion of retail outlets selling cigars was significantly reduced after the TCA, although 85% of outlets were observed to sell these products at follow-up. Flavored cigarettes or cigars were also observed in a high proportion of retail outlets, with a significant increase to 83% at follow-up. No sales of loose cigarettes were observed at baseline or follow-up.

Table 2. Smokeless Tobacco Advertisements and Sales Practices at Retail Tobacco Outlets Before and After the Tobacco Control Act in Three Appalachian Ohio Counties

Description	Baseline ($n = 86$), M (SD) or % (n)	Follow-up ($n = 79$), M (SD) or % (n)
Location/type of advertisements		
Exterior		
On-site	0.6 (1.6)	0.2 (0.7)*
On-building	1.2 (2.3)	0.6 (1.4)*
Interior		
Any ST ads (n)	77% (66)	76% (64)
Number of ST brands advertised	3.3 (2.7)	6.6 (4.1)*
Prevalence of specific ST brands		
Copenhagen	69% (59)	53% (42)
Skoal	45% (47)	58% (46)
Camel Snus	40% (34)	43% (34)
Grizzly	35% (30)	66% (52)
Red Seal	23% (20)	51% (40)
ST brands on functional items ^a	0.4 (0.8)	0.04 (0.2)*
Practices inside outlets		
Advertisements		
Illuminated ads for ST	4% (3)	0% (0)
Illuminated ads for cigarettes	10% (8)	0% (0)
Free ST products with purchase	0% (0)	1% (1)
ST coupon toward next purchase	4% (4)	4% (4)
ST-branded counter decals	8% (7)	0% (0)
ST-branded floor decals	1% (1)	0% (0)
Ads for any tobacco cessation aids	8% (7)	9% (8)*
Sales		
Cigars	93% (70)	85% (64)*
Flavored cigarettes or cigars	79% (60)	83% (62)*
Loose cigarettes	0% (0)	0% (0)
Self-service cigarettes	12% (10)	7% (6)*
Self-service ST products	31% (25)	3% (2)*

Notes. ST = smokeless tobacco.

^aIncludes mirrors, clocks, change mats, or other items displayed with a visible ST brand.

* $p < .05$.

Discussion

This investigation is the first study to examine certain changes in ST advertising and sales practices in tobacco-licensed retail outlets following the TCA. A reduction in the prevalence of ST advertisements was observed after the implementation of the TCA. Specifically, although there was no statistically significant reduction in the proportion of stores advertising ST, the frequency of exterior ads was significantly reduced in this sample of retail outlets. In the store interior, the mean number of observed ST brands doubled between baseline and follow-up.

These initial findings represent a positive change in marketing exposure in tobacco-licensed retail outlets following the TCA. Yet, after the MSA, the tobacco industry demonstrated creativity and resilience in the development of new marketing strategies to reach potential consumers (Ruel et al., 2004), a pattern that may likely be repeated. Our results suggest that there is a high density of tobacco marketing messages that can be observed within retail outlets. The doubling of the number of ST brands being advertised after the regulation underscores the importance of ST as a growing aspect of tobacco marketing exposure and warrants continued monitoring to determine evolving trends. Future monitoring studies should evaluate the presence of flavored cigarettes, a practice banned under the TCA but not enforced until after these data were collected.

Retail tobacco outlets have been associated with tobacco use behaviors and are often clustered in socially disadvantaged neighborhoods (Hyland et al., 2003; Li, Land, Zhang, Keithly, & Kelsey, 2009; Paul et al., 2010; Peterson, Lowe, & Reid, 2005; Yu, Peterson, Sheffer, Reid, & Schnieder, 2010); this yields additional challenges in youth prevention and adult cessation. For example, adolescent smoking prevalence has been positively associated with retail outlet density near schools (Henriksen et al., 2008). Barriers to cessation include retail tobacco displays (Germain, McCarthy, & Wakefield, 2010; Hoek, Gifford, Pirikahu,

Thomson, & Edwards, 2010) as well as living in proximity to tobacco outlets (Reitzel et al., 2011).

These results may be generalizable to other similar rural regions but are not likely to apply to urban areas. The strengths of this study include an examination of marketing practices both before and after this landmark federal regulation and an assessment of marketing in an underserved rural area. Rural residents may be at risk for novel marketing approaches, especially where a culture to support tobacco use is apparent. Another design strength is the stratified random sampling strategy, which included all regions within each county at a high response rate. Limitations include that the legal injunction on the black and white advertising requirement (known as the “tombstone” advertising provision) remains unresolved and was not evaluated in the current research. The present study focused on observational practices within retail outlets but did not capture information regarding retailer awareness of the TCA regulation; future work regarding retailer awareness may be informative regarding local tobacco control efforts.

With continued test marketing and development of new ST products, especially those products that appear to be targeted toward current tobacco users, efforts are needed to monitor the marketing and advertising practices of ST products. Such information will be critical to develop appropriate counter-marketing and intervention strategies to reduce tobacco-related morbidity and mortality.

Funding

This research was made possible by a grant from the National Cancer Institute (R21 CA129907). The content is solely the responsibility of the authors and does not necessarily represent the official view of the National Cancer Institute.

Declaration of Interests

None to declare.

References

- Boffetta, P., Hecht, S., Gray, N., Gupta, P., & Straif, K. (2008). Smokeless tobacco and cancer. *Lancet Oncology*, 9, 667–675. doi:10.1016/S1470-2045(08)70173-6
- Centers for Disease Control and Prevention. (2010). Vital signs: Current cigarette smoking among adults aged ≥ 18 years—United States, 2009. *Morbidity and Mortality Weekly Report*, 59, 1135–1140. <http://www.cdc.gov/mmwr>
- Cohen, J., Planinac, L. C., Griffin, K., Robinson, D. J., O'Connor, S. C., Lavack, A., et al. (2008). Tobacco promotions at point-of-sale: The last hurrah. *Canadian Journal of Public Health*, 99, 166–171. <http://www.cpha.ca/en/cjph.aspx>
- Federal Trade Commission. (2009). *Federal Trade Commission Cigarette Report for 2006*. Washington, DC: Author.
- Ferketich, A. (2011). *Prevalence of current smoking and ST use in Ohio and county type groupings, by sex*. Personal communication, Ohio Family Health Survey, 2010.
- Food and Drug Administration. (2010). Regulations restricting the sale and distribution of cigarettes and smokeless tobacco to protect children and adolescents. Final rule. *Federal Register*, 75, 13225–13232. <http://www.gpoaccess.gov/fr/>
- Germain, D., McCarthy, M., & Wakefield, M. (2010). Smoker sensitivity to retail tobacco displays and quitting: A cohort study. *Addiction*, 105, 159–163. doi:10.1111/j.1360-0443.2009.02714.x
- Hatsukami, D. K., Ebbert, J. O., Feuer, R. M., Stepanov, I., & Hecht, S. S. (2007). Changing smokeless tobacco products: New tobacco-delivery systems. *American Journal of Preventive Medicine*, 33, S368–S378. doi:10.1016/j.amepre.2007.09.005
- Henriksen, L., Feighery, E. C., Schleicher, N. C., Cowling, D. W., Kline, R. S., & Fortmann, S. P. (2008). Is adolescent smoking related to the density and proximity of tobacco outlets and retail cigarette advertising near schools? *Preventive Medicine*, 47, 210–214. doi:10.1016/j.ypmed.2008.04.008
- Hoek, J., Gifford, H., Pirikahu, G., Thomson, G., & Edwards, R. (2010). How do tobacco retail displays affect cessation attempts? Findings from a qualitative study. *Tobacco Control*, 19, 334–337. doi:10.1136/tc.2009.031203
- Hyland, A., Travers, M. J., Cummings, K. M., Bauer, J., Alford, T., & Wiczorek, W. F. (2003). Tobacco outlet density and demographics in Erie County, New York. *American Journal of Public Health*, 93, 1075–1076. <http://ajph.aphapublications.org/>
- Lavack, A. M., & Toth, G. (2006). Tobacco point-of-purchase promotion: Examining tobacco industry documents. *Tobacco Control*, 15, 377–384. doi:10.1136/tc.2005.014639
- Li, W., Land, T., Zhang, Z., Keithly, L., & Kelsey, J. L. (2009). Small-area estimation and prioritizing communities for tobacco control efforts in Massachusetts. *American Journal of Public Health*, 99, 470–479. doi:10.2105/AJPH.2007.130112
- National Association of Attorneys General. (1998). *Multistate settlement with the tobacco industry*. Retrieved from Tobacco Control Resource Center website: http://www.tobacco.neu.edu/tobacco_control/resources/msa/multistate_settlement.htm
- Nelson, D., Mowery, P., Tomar, S., Marcus, S., Giovino, G., & Zhao, L. (2006). Trends in smokeless tobacco use among adults and adolescents in the United States. *American Journal of Public Health*, 96, 897–905. doi:10.2105/AJPH.2004.061580
- Paul, C., Mee, K. J., Judd, T. M., Walsh, R. A., Tang, A., Penman, A., et al. (2010). Anywhere, anytime: Retail access to tobacco in New South Wales and its potential impact on consumption and quitting. *Social Science & Medicine*, 71, 799–806. doi:10.1016/j.socscimed.2010.05.011
- Peterson, N. A., Lowe, J. B., & Reid, R. J. (2005). Tobacco outlet density, cigarette smoking prevalence, and demographics at the county level of analysis. *Substance Use & Misuse*, 40, 1627–1635. doi:10.1080/10826080500222685

- Reitzel, L., Cromley, E. K., Li, Y., Cao, Y., Mater, R. D., Mazas, C. A., et al. (2011). The effect of tobacco outlet density and proximity on smoking cessation. *American Journal of Public Health, 101*, 315–320. doi:10.2105/AJPH.2010.191676
- Ruel, E., Mani, N., Sandoval, A., Terry-McElrath, Y., Slater, S. J., Tworek, C., et al. (2004). After the Master Settlement Agreement: Trends in the American tobacco retail environment from 1999 to 2002. *Health Promotion Practice, 5*, 99S–110S. doi:10.1177/1524839904264603
- SAS Institute. (2008). *SAS (version 9.2)*. SAS Institute: Cary, NC.
- Substance Abuse and Mental Health Services Administration. (2010). *National survey on drug use and health, 2008 and 2009*. Rockville, MD.
- U.S. Tobacco Company. (1998). *Smokeless Master Settlement Agreement*. Retrieved from California Department of Justice website: <http://oag.ca.gov/tobacco/ssa>
- Yu, D., Peterson, N. A., Sheffer, M. A., Reid, R. J., & Schnieder, J. E. (2010). Tobacco outlet density and demographics: Analysing the relationships with a spatial regression approach. *Public Health, 124*, 412–416. doi:10.1016/j.puhe.2010.03.024