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Boosting the Tobacco Control Vaccine: Recognizing the Role of the Retail Environment in Addressing Tobacco Use and Disparities

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Abstract

Much of the progress in reducing cigarette smoking and tobacco-related morbidity and mortality among youth and adults is attributable to population-level strategies previously described in the context of the Tobacco Control Vaccine. The retail environment is used heavily by the tobacco industry to promote and advertise its products, and variations in exposure to and characteristics of the retail environment exist across demographic groups. It is therefore also an essential environment for further reducing smoking, as well as ameliorating racial, ethnic, and socioeconomic tobacco-related disparities. This commentary provides an overview of the importance of incorporating strategies focused on the tobacco retailer environment (availability; pricing and promotion; advertising and display; age of sale; and retail licensure) as part of a comprehensive approach to tobacco prevention and control. To reach tobacco endgame targets, such innovative strategies are a complement to, but not a replacement for, longstanding evidence-based components of the Tobacco Control Vaccine.

BACKGROUND

Globally, substantial progress has been made in tobacco control, and much of this progress is a result of the implementation of evidence-based, population-based strategies, including those outlined in the World Health Organization's Framework Convention on Tobacco Control (FCTC).[1,2] The strategies that have been most impactful against the tobacco epidemic have recently been described in the context of the Tobacco Control Vaccine.[3] The four components of the Tobacco Control Vaccine include tobacco price increases, smoke-free policies, hard hitting media campaigns, and access to cessation resources.[3]

However, while progress has been made in combatting the tobacco epidemic globally, calls have been made to explore additional strategies to further reduce the burden of tobacco

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use.[4,5] These “endgame” strategies are defined as “Initiatives designed to charge/eliminate permanently the structural, political and social dynamics that sustain the tobacco epidemic, in order to end it within a specific time.”[6] The importance of considering aspects of place (both locally and globally) when implementing endgame strategies has been noted, especially as local context and endgame strategies may impact various social groups differentially.[7] For example, potential endgame strategies include several actions focused on the point of sale (POS), including licensing of tobacco retailers and banning the sales of combustible tobacco products.[8] To date, several countries have instituted varying smoking prevalence endgame targets, including New Zealand (5% smoking prevalence by 2025), Scotland (<5% by 2034), and Hong Kong (5% by 2022).[7]

The U.S. has not set an endgame target, but two of the primary strategies discussed in recent Surgeon General Reports include POS-related strategies, including bans on the sales of some categories of tobacco products.[9,10] As the tobacco control landscape has evolved in recent decades, the retail sector has become an increasingly prominent place for tobacco product access and marketing. Accordingly, retail-focused tobacco control strategies may be important levers for further reducing overall cigarette smoking, and ameliorating observed racial, ethnic, and socioeconomic tobacco-related disparities.

This commentary provides an overview of the importance of incorporating retail-focused strategies as part of an integrated approach to help achieve the tobacco endgame. As the U.S. has just begun more robust discussions on retailer-focused endgame strategies, we use the U.S. as an underlying framework, with the understanding that these strategies may be applicable globally.

FEDERAL REGULATORY CONTEXT

With the passage of regulations in the U.S. addressing the manner in which tobacco products can be advertised, including the 1998 Master Settlement Agreement and the 2009 Prevent All Cigarette Trafficking (PACT) Act, the tobacco industry has continued to shift its advertising and promotion expenditures toward less regulated areas, most notably the retail environment.[11,12] Tobacco industry documents and interviews with tobacco retailers reveal the industry’s use of contracts and retailer promotional incentive programs to secure prime POS display space to encourage high sales volumes.[11,12] In the U.S. alone, the tobacco industry spent approximately $9.4 billion[13] on the marketing of cigarette and smokeless tobacco products in 2017, $7.3 billion[14] of which was for marketing and promotion in the retail environment. The 2009 Family Smoking Prevention and Tobacco Control Act (FSPTCA) granted the Food and Drug Administration (FDA) authority to regulate several aspects of the tobacco retail environment, including tobacco advertising, marketing, sales, and distribution.[15] Importantly, the FSPTCA does not preempt, or prohibit, states and communities from enacting more stringent retailer-focused strategies.

TOBACCO RETAILER ENVIRONMENT

It is estimated that there are 375,000 retailers that sell tobacco products across the U.S.[16] Both adults and youth regularly interact with tobacco retailers, and the average U.S. store

has nearly 30 tobacco marketing materials (e.g., branded signs; branded shelving, such as power walls; branded functional items).[17] In the U.S., gas and convenience stores are the most common type of tobacco retailer and also have a higher prevalence of tobacco advertising than other retailer types.[17] The majority of U.S. adult smokers purchase their cigarettes at gas and convenience stores,[18] and nearly half of youth visit convenience stores weekly.[19] Additionally, variations in exposure to the retail environment exists across demographic groups; for example, Black youth living in rural areas and those with greater neighborhood deprivation (e.g., poverty level, education, unemployment) are more likely to report weekly convenience store visits.[19]

Inequities in the Tobacco Retail Environment

Examination of historical tobacco industry documents reveals the tobacco industry's focus on the retail environment as a venue for targeting their products to certain groups. In 1984, an RJ Reynolds consumer report indicated that the Black population was an "important target group" and outlined strategies for reaching this population, including encouraging menthol cigarette brands, increasing the availability of promotions, and placing promotions in specific store types.[20,21] Additionally, flavored cigars were designed to appeal to new tobacco users and women, with menthol cigars specifically being targeted to young adult Black smokers and neighborhoods with higher proportions of Black individuals.[22] These industry tactics likely continued to influence industry marketing over subsequent decades, and may also explain some of the continued disparities in tobacco product availability, marketing, and use.

Numerous studies have documented higher tobacco retailer availability in lower income neighborhoods and in those with a higher proportion of historically marginalized and minoritized groups.[23,24] A U.S. study found that neighborhoods with a greater proportion of Black residents and those living below the poverty level had a greater number of retailers per 1000 people.[23] In Ontario (Canada), the density of retailers per 1000 people was higher in areas with greater neighborhood deprivation; this was consistent in both urban and rural jurisdictions.[24]

This disparity in retailer availability also translates into inequities in POS tobacco marketing. A 2014 systematic review of 33 studies from the U.S. and 10 studies from other countries (Australia, Canada, Guatemala, Argentina, India, New Zealand, United Kingdom) indicated greater POS tobacco product marketing in neighborhoods with greater socioeconomic disadvantage (e.g., median household income, socioeconomic or deprivation indices).[25] Furthermore, those neighborhoods with a higher proportion of Black residents had more menthol marketing.[25] This is of public health concern because both greater retailer availability[26–28] and exposure to POS marketing[29–32] are associated with increased smoking and decreased cessation.

TOBACCO RETAIL-FOCUSED STRATEGIES

To date, primary retailer-focused strategies have fallen under the following five major categories, which we deem the Tobacco Control Vaccine Booster (Figure 1): product availability; pricing and promotion; advertising and display; age of sale; and retail licensure.

Product Availability

One way to decrease the presence of the tobacco industry in the retail environment is to prohibit sales of the product. While the FDA cannot prohibit entire tobacco product classes, states and localities are not preempted from prohibiting their sales.[9] In 2019, Beverly Hills, California became the first U.S. jurisdiction to unanimously vote to prohibit the sales of all tobacco products, including e-cigarettes, effective January 2021; however, cigar lounges and hotels are exempt.[33] In 2020, Manhattan Beach, California became the second U.S. jurisdiction to approve a similar regulation without carve-outs.[34] However, in both places, all retailers are able to apply for hardship exemptions that would allow them to continue selling tobacco products for a limited time.[33,34]

Flavored Tobacco Products—Numerous jurisdictions have also taken actions to limit the availability of specific tobacco product types, namely flavored tobacco products. Flavored combustible tobacco products, including mentholated products, reduce the harshness of smoke, making it easier to inhale.[22,35,36] As such, flavored products are particularly appealing to novice smokers such as youth.[37,38] In 2015, Nova Scotia, Canada became the first jurisdiction in the world to implement a ban on the sales of menthol cigarettes, and there has been no evidence of increased illicit cigarette sales.[39] In October 2017, a federal Canadian menthol tobacco product ban was implemented.[40] Turkey was the first country to implement a menthol ban on cigarettes and hand-rolled tobacco in 2015, and this regulation was fully implemented in May 2020.[41] Additionally, the European Union fully implemented a ban on menthol cigarettes and roll-your-own tobacco in May 2020;[41] however, menthol is not banned as an ingredient, and the industry has introduced ‘menthol-flavored accessories.’[42]

Under the FSPTCA, the U.S. prohibited the sales of flavored cigarettes, but exempted menthol.[15] In early 2020, the FDA issued guidance to prohibit certain types of flavored e-cigarettes; however, certain products are still permissible for sale, including menthol and tobacco-flavored e-cigarettes, all flavored cigars, and non-cartridge based flavored e-cigarettes.[43] As of June 2020, over 270 U.S. localities have prohibited the sale of flavored tobacco products; at least 100 of these jurisdictions further restrict menthol cigarette sales.[44] At the state level, Massachusetts is currently the only state to prohibit the retail sales of all flavored tobacco products, including menthol cigarettes and e-cigarettes (effective June 2020).[44] The inclusion of menthol is an important step toward reducing youth consumption, as well as health disparities given that Black populations have markedly higher menthol smoking rates than other groups in the U.S., partially attributable to tobacco industry targeting.[21,45]

Minimum Package Sizes—Sales requirements on minimum package sizes could also help deter the availability of inexpensively priced tobacco products. Tobacco products packaged in smaller quantities can be sold at a lower price, which may be more appealing to price sensitive users, including youth or lower income individuals.[46–48] While the FDA requires cigarettes to be sold in packages of 20, other tobacco products do not have package size requirements. For example, cigarillos are often sold in packages of 2–5 units[49] and are more commonly used among males, younger adults, Black individuals, those with a

GED/high school diploma, and those with lower socioeconomic status.[50–52] As of 2018, several jurisdictions in California require cigars to be sold in packages of at least five.[53]

Pricing and Price Promotions

Increasing the price of tobacco products is the single most effective strategy for reducing consumption, and is particularly impactful among price sensitive users.[47,48] Tobacco product excise taxes have been widely implemented and are the most effective pricing strategy for reducing tobacco use.[54] However, increased taxes on only some tobacco products may result in product switching to more affordable products, as was observed in Australia.[55] Other pricing strategies in tandem with taxes warrant consideration.

Minimum Floor Price—Minimum floor price (MFP) laws set a minimum price that a tobacco product may be sold for, and these strategies may help reduce consumption by increasing prices above the market price.[56,57] Furthermore, by setting a MFP, discount tobacco products, which appeal more to price sensitive smokers, are often eliminated from the market,[57] and thus may help decrease tobacco use among these groups. Importantly, policies that increase the price of tobacco products may result in price sensitive smokers paying a greater proportion of their income on tobacco products,[58,59] resulting in financial stress. However, smokers who are exposed to greater POS marketing are more likely to impulsively purchase tobacco products,[29,32,60,61] which may also lead to increased financial stress.[62] Additionally, many price sensitive groups have historically been targeted by the tobacco industry and experience a disproportionate burden of tobacco-related illness.[63]

While MFP laws are a relatively new strategy, they have been implemented by several U.S. jurisdictions. Since 2012, at least 151 Massachusetts municipalities have passed cigar-packaging regulations requiring single cigars to be sold for at least $2.50 and those packaged in greater quantities to be sold for at least $5.00.[64] During 2014–2018, the average price of single cigars in places with the MFP increased from $2.24 to $2.41, and the availability of single cigars decreased from 28% to 14%.[64] At the state-level, youth cigar use decreased from 14.3% to 6.7%.[64] Finally, in 2017, New York City raised the MFP for cigarettes from $10.50 to $13, and set MFPs for cigars, smokeless tobacco, shisha, and loose tobacco.[65]

Early studies indicate that MFP laws have the potential to narrow income-based cigarette smoking disparities.[56,66] However, the potential effectiveness of these strategies may be undermined by both a strong illicit market and too low MFPs, as occurred in Malaysia.[67] Finally, an unintended consequence of MFP laws is that the tobacco industry may profit off higher floor prices.[57] An alternative endgame strategy entails capping the pre-tax wholesale price, which would still allow for higher prices, but increased revenue would benefit the government.[8,68]

Price Promotions—An important part of MFP laws is that price promotions, which might lower the product price below the floor price, are prohibited.[57] If tobacco product prices are increased through taxes or non-tax means, the use of price promotions may offset the benefits of increasing price.[69] In 2013, Providence, Rhode Island began prohibiting multi-pack discounts and the redemption of coupons that would lower tobacco product prices below the listed retail price.[70] Several countries, including Brazil, Canada,

India, and the United Kingdom, have enacted comprehensive bans on tobacco product promotional discounts.[71] Given that tobacco products are less expensive, and promotions are more prevalent, in neighborhoods with greater disadvantage and higher proportions of marginalized groups,[25] retailer-focused strategies that increase the price of tobacco products may help ameliorate some tobacco-related disparities.

Advertising and Display

Exposure to POS advertising and marketing is associated with youth initiation, cravings, impulse purchases, and decreased cessation.[29,31,32] To date, no U.S. jurisdictions have comprehensively prohibited POS marketing. However, New York state will implement a law that prohibits the exterior display of tobacco products and advertisements within 1500 feet of a school beginning July 2020.[72]

Several countries have comprehensive POS display bans.[32] One study found that adult smokers had decreased exposure to POS tobacco marketing and were less likely to make unplanned purchases for cigarettes after the implementation of POS bans in Australia and Canada.[73] POS bans have also been found to decrease youth smoking behaviors in New Zealand[74] and Australia.[75] However, the tobacco industry has responded to display bans through the use of retailer incentives, such as price discounts, in exchange for retailer actions (e.g., recommending brands, maintaining stock, listing specific brands on price lists).[76,77] Accordingly, continued surveillance of the retailer environment is warranted, even in countries with POS display bans.

Age of Sale

Among adult daily smokers, 90% began smoking before they turned 19 years old, and nearly all began before age 25.[78] Raising the minimum age of sale may make it more difficult for youth to purchase and obtain tobacco products from older social sources.[78,79] U.S.-based simulation studies estimate that raising the age of tobacco sales to 21 would result in a 12 percent decrease in smoking prevalence and a large reduction in smoking-related morbidity and mortality over time.[78]

In December 2019, the U.S. federal minimum age of sale was increased from 18 to 21 years. The federal regulation does not exempt military populations, who have higher tobacco use prevalence than civilians.[80] Prior to this federal action, 19 states and 540 localities had increased the minimum age of sale for tobacco products, including e-cigarettes, to 21.[81] One study found that during 2011–2016, 18–20 year old individuals living in places with local tobacco-21 policies had a 2.4–3.1 percentage point reduction in the likelihood of being a current smoker.[82] Furthermore, an evaluation of California's 2016 law found retailer violation rates of selling to a minor decreased 4.6% seven months after implementation.[83]

In recent years, the tobacco industry, including e-cigarette manufacturers, has voiced public support for laws that increase the minimum age of sales to 21.[84,85] In 2012, the U.S. Surgeon General noted that tobacco industry-supported youth access bills have: included provisions that preempt stricter local laws; placed responsibility for enforcement on agencies without necessary capabilities; complicated prosecution of retailers for violations; and focused penalties on youth for tobacco product purchase, use, or possession (PUP).[37]

Currently, 44 U.S. states have PUP policies.[78] However, concerns have been raised about such laws, including that they do not hold the tobacco industry or retailers responsible for sales to minors, enforcement can be low or may be conducted inequitably (e.g., African American and Hispanic youth were more likely to receive citations), and such laws are ineffective at reducing youth initiation and smoking prevalence.[78,86,87] Therefore, it is important to closely monitor provisions within industry-supported policies and assess their potential to undermine public health objectives.

Retail Licensure

To implement and enforce any of the above tobacco retailer environmental strategies, it is essential for jurisdictions to know which retailers are selling tobacco products. To date, 38 U.S. states require retailers to have a license to sell conventional tobacco products.[88] A 2014 California study found that youth and young adults living in jurisdictions with strong local retail licensing ordinances were less likely to use cigarettes.[89] However, many tobacco retailer licensing lists are not valid, often making it difficult to track and enforce policies.

By knowing where tobacco retailers are located, a licensing system lends itself to tobacco retailer reduction strategies. A type of ‘cap and winnow’ approach has been proposed,[90] where a cap on the number of tobacco retailers in a jurisdiction is set and no additional retailers may open until the total number of retailers is below this cap. Moreover, if retailers violate existing tobacco control policies (e.g., selling to a minor), they lose their license to sell tobacco, resulting in a natural reduction of tobacco retailers over time.[90] After increasing tobacco license fees by 15-fold in South Australia, the number of licenses decreased by almost 24%.[91] A similar decrease (10,000 licenses to 7250) was observed in Finland after an increased fee.[92] Other common retailer reduction strategies include prohibiting tobacco retailers near schools, within a certain distance of one another, and prohibiting certain retailer types (e.g., pharmacies) from selling tobacco products.[90] Theoretically, as the number of retailers decreases, exposure to POS marketing should decrease as well.

Various retailer reduction strategies, especially those focused on specific retailer types, may differentially impact overall retailer availability, which may in turn disproportionally protect some groups more than others. One of the first retailer reduction policies focused on ameliorating disparities was implemented in San Francisco, California in 2015.[93] After documenting stark racial, income, and youth availability disparities in the number of tobacco retailers, this policy set a cap on the number of tobacco retailers to 45 per supervisorial district.[93] Within the first 10 months of policy implementation, the total number of tobacco retailer licenses decreased by 8%.[93] In contrast, an examination of New York City’s tobacco-free pharmacy law found that while retailer density would decrease overall, this decline was greater in neighborhoods with higher income and greater proportions of White residents.[94] To address these disparities, New York City also implemented a cap, setting a maximum number of tobacco retailer licenses to 50% of the total present in 2018.[95]

CONCLUSIONS

The retail environment is used heavily by the tobacco industry to promote and advertise its products. It is therefore also an essential environment for tobacco prevention and control strategies. More recently, as emerging research indicates that smokers are at a higher risk of severe complications due to COVID-19, renewed opportunities exist to reinforce the viability of retailer-focused strategies to address tobacco use and achieve the end game.[96,97] While several countries have set endgame smoking prevalence targets to be at or less than 5%,[7,98] novel and integrated strategies are becoming increasingly essential to ensure that tobacco-related disparities do not widen, especially for those groups that have disproportionately experienced the burden of tobacco-related disease. Retailer-focused strategies are a complement to, but not a replacement for, longstanding evidence-based components of the Tobacco Control Vaccine and the FCTC. Furthermore, retail-focused strategies may be most impactful when combined together. For example, minimum packaging sizes could be paired with MFP laws, and prohibiting the sales of tobacco products or reducing the number of tobacco retailers in an area would also likely result in the elimination or reduction of POS advertising.

As with all tobacco control strategies, compliance is also critical to ensure efficacy and equity. For example, an analysis of 2015 FDA underage sales inspections found that retailers located in neighborhoods with a greater proportion of Black and Latino residents were more likely to sell tobacco products to minors.[99] If there is not strong compliance or enforcement is inequitable, population-level effects may not be fully realized.[100]

Retailer-focused strategies should be implemented at multiple governmental levels, including local, state, and national. Within the U.S., tobacco control has traditionally percolated from the bottom up, with local and state level momentum eventually spreading nationally as social norms shift and policies benefits accrue.[101] This was most recently evident with the U.S. federal passage of a minimum age of sale law to 21 years, following considerable state and local momentum on this issue in the preceding 15 years. Within the U.S., the tobacco industry has introduced state-level preemptive language to prevent local jurisdictions from being able to enact some tobacco control legislation in their communities.[101] Given observed local-level disparities in tobacco retailer availability and marketing,[25,102–108] the prohibition of local-level retailer-focused strategies may also contribute to widening tobacco-related disparities.

The tobacco product landscape continues to diversify to include a variety of novel electronic, heated, and smokeless products, further reinforcing the importance of integrating emerging retailer environment strategies in an effort to boost the Tobacco Control Vaccine. Retailer-focused strategies can serve as an important complement to existing evidence-based strategies as part of a comprehensive approach to reduce tobacco-related disease and death, especially for those groups with the greatest burden of tobacco use and tobacco-related disease and death.

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What this paper adds:

- Globally, substantial progress has been made in tobacco control, and much of this progress is a result of the implementation of evidence- and population-based strategies.
- The four components of the Tobacco Control Vaccine (tobacco price increases, smoke-free policies, hard hitting media campaigns, and access to cessation resources) have been most impactful against the tobacco epidemic.
- The retail environment is used heavily by the tobacco industry to promote and advertise its products and is therefore, an essential environment for tobacco prevention and control strategies.
- Primary retailer-focused tobacco control strategies have fallen under the following five major categories: product availability; pricing and promotion; advertising and display; age of sale; and retail licensure.
- Retail-focused tobacco control strategies may boost the Tobacco Control Vaccine to further reduce tobacco use and to ameliorate tobacco-related health disparities.

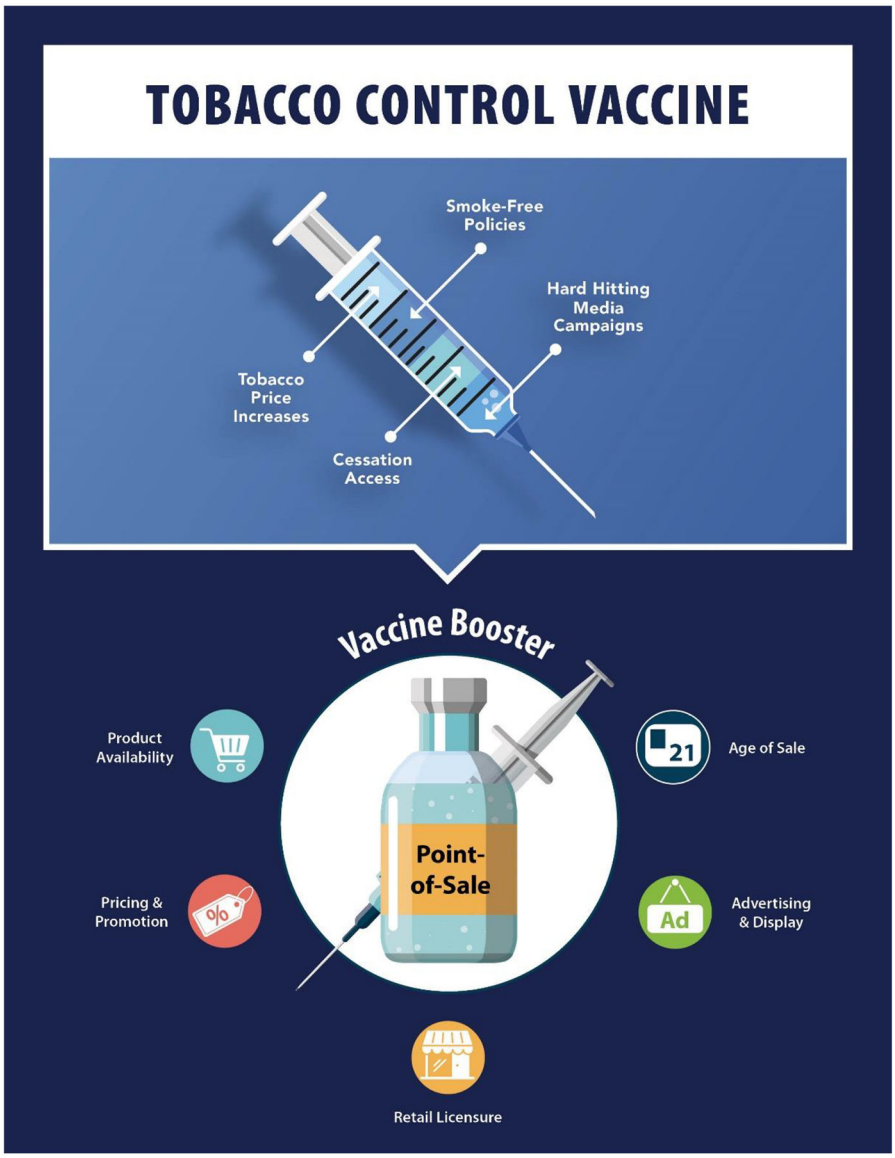

Figure 1.

The Tobacco Control Vaccine Booster: Five Retailer-Focused Strategies to Boost the Tobacco Control Vaccine