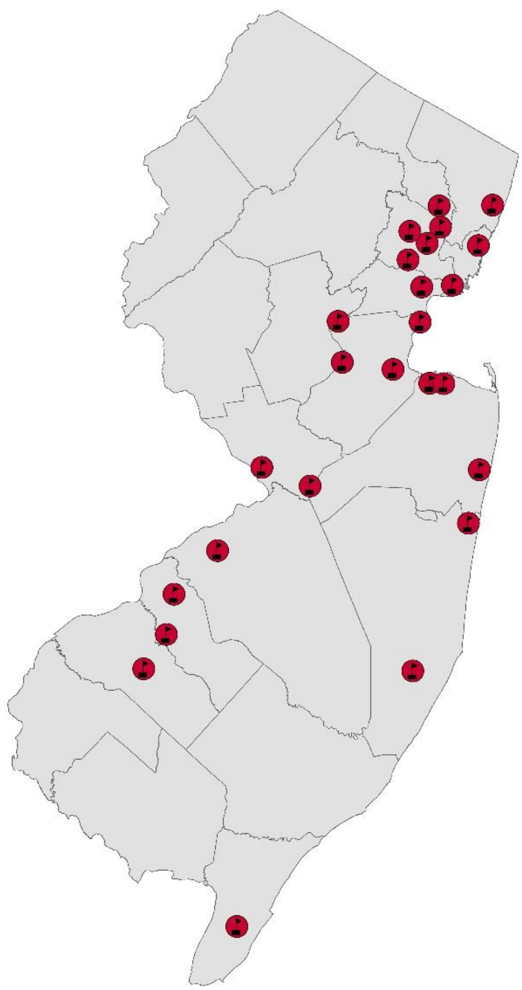
New Jersey Tobacco Point-of-Sale Review

January 2022



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ACKNOWLEDGEMENTS

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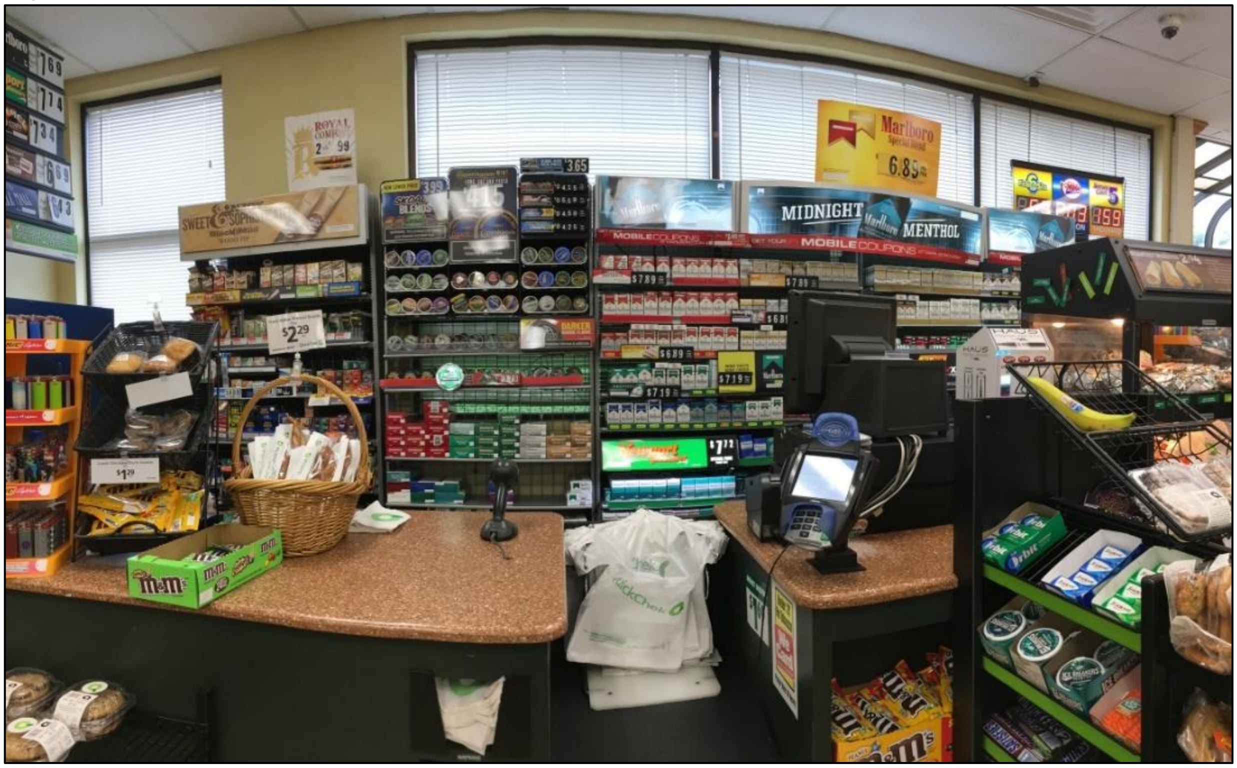
BACKGROUND

The tobacco industry has innovated many advertising methods including color lithography of the pack, skywriting, billboard photolithography, stop-motion animation, and coast to coast radio sponsorship.[1] Prior to the ban on traditional forms of advertisements (e.g., billboards, transit advertisements, sponsorships, and product placement in the media), industry executives were ready to mobilize towards point-of-sale (POS) advertising where their brands could be "dominantly displayed and advertised."[2] It is not that surprising, then, that after the 1998 Master Settlement Agreement (MSA) banned many traditional forms of tobacco advertising, the tobacco industry began investing billions of dollars marketing its products at the point-of-sale. For example, in 2020, cigarette and smokeless tobacco companies spent more than 8.4 billion dollars on product marketing, most of which occurred in the retail setting through price discounting, promotional allowances, and point of sale advertising.[3,4] The tobacco industry provides incentives to retailers to post signage inside and outside of their stores to promote their products. Among the most popular is a "power wall," an interior large shelving display that showcases numerous tobacco products and features company logos and other advertisements (see Figure 1).

Figure 1. A tobacco "power wall" in a New Jersey convenience store



Tobacco advertisements in retail settings have the potential to encourage current users to keep buying tobacco products, entice non-users to start, and perpetuate the idea that smoking is socially acceptable. Exposure to tobacco promotions in stores is also known to influence product use among youth. The tobacco retail environment in areas where youth spend time (e.g., near parks, schools) seems particularly influential. Several studies have documented a consistent relationship between tobacco advertising near schools and cigarette smoking among students.[5,6]

Although rates of cigarette smoking among youth have declined in recent years, use of non-cigarette tobacco products, such as cigars/cigarillos, smokeless tobacco, electronic cigarettes (e-cigarettes) and hookah, should continue to be monitored. (Figure 2, below, describes these non-cigarette tobacco products).

Figure 2. Description of non-cigarette tobacco products

Product	Description	Examples
Cigars or cigarillos	Roll of tobacco wrapped in a tobacco leaf or another substance containing tobacco. Products come in many different sizes and some include wooden or plastic tips. Among young people, cigarillos are sometimes used to roll blunts with marijuana. Popular brands include Black & Mild, Swisher Sweets, and Dutch Masters.	
Smokeless tobacco	Typically refers to moist snuff (sometimes called "dip") and snus (a Swedish type of moist snuff). The user places the shredded or ground tobacco between their lip and their gum. Popular brands include Grizzly, Copenhagen, Skoal and Camel Snus.	
Tobacco-free nicotine pouches	Oral nicotine products are used similarly to snus. Unlike snus, they do not contain leaf tobacco. The products are still derived from tobacco and contain nicotine. Popular brands include Zyn, Velo, and On!.	
Electronic cigarettes ("e-cigarettes")	A battery-powered device that produces a vapor that the user inhales. The vapor often contains nicotine, flavorings, and other chemicals. E-cigarettes are sold in pods and disposable varieties. Popular brands include JUUL, Vuse, Hyppe and Puff Bar.	
Hookah Tobacco	A mix of tobacco and molasses, with additive flavors, smoked through a single- or multi-stemmed charcoal-heated apparatus. Popular brands include Al Fakher and Starbuzz.	

Data from the 2018 New Jersey Youth Tobacco Survey (NJYTS) showed that while 2.9% of high school students were current cigarette smokers, 17.8% were current users of e-cigarettes, 6.4% were current hookah tobacco users, and 4.0% were current cigar/cigarillo smokers.[7] The promotion of non-cigarette tobacco products such as e-cigarettes, cigars/cigarillos and tobacco-free nicotine pouches in retail settings is understudied, but emerging evidence suggests that these products are advertised in much the same way as cigarettes.[8] Figure 3 highlights the visibility of non-cigarette tobacco product advertising in a New Jersey convenience store.

Figure 3. Non-cigarette tobacco product advertising in a New Jersey convenience store

Recent federal and state actions have attempted to decrease the availability of flavored e-cigarettes. In an effort to curb the use of e-cigarettes among youth and young adults, the U.S. Food and Drug Administration (FDA) issued a prioritized enforcement policy for flavored cartridge-based e-cigarette products, excluding menthol, that did not have premarket authorization, effective February 2020. New Jersey (NJ) also became the first state to ban the sales of all types of flavored e-cigarette products, including menthol and mint, effective April 2020. This report provides the first data on flavored e-cigarette availability in New Jersey licensed tobacco retail stores following the implementation of the state's ban on such products.

AIMS

Surveillance of tobacco marketing at the point-of-sale near high schools can provide insight into factors that may contribute to elevated rates of tobacco use among students. This project collected repeated point-of-sale data (interior and exterior of stores) drawn from stores surrounding a representative sample of New Jersey high schools (n=41) between 2015 and 2021. We present the prevalence of product availability and advertising across all schools, as well as differences by store type and locality (urban vs. non-urban school districts) for 2021 as well as over the last three years.

METHODS

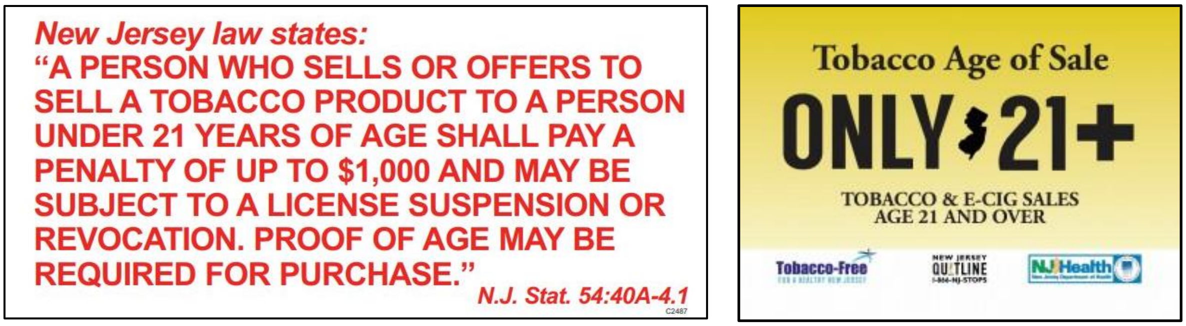
In 2015, we mapped the locations of the 41 high schools participating in the 2014 NJYTS and drew a half-mile buffer around each school. The half-mile radius (2,640 ft.) was chosen as the cutoff based on the premise that this was the most convenient distance that students would travel before, during, and after school. Of the 41 schools participating in the 2014 NJYTS, 15 (36.6%) had no tobacco retailers within a half-mile radius and these were excluded from data collection. The remaining 26 schools had a total of 211 licensed tobacco retailers within a half-mile radius. In 2017, one high school changed location, but we repeated audits in the two licensed tobacco retailers located nearby. In 2019, a school with one tobacco retailer within a half-mile radius was omitted from the sample due to the store's permanent closure, bringing the total number of schools with at least one tobacco retailer within a half-mile radius to 25.

We attempted audits each year at all 211 licensed tobacco retailers identified in the original sample in 2015. Between 2015 and 2017, we repeated audits in 191 stores - a number of stores either closed or no longer sold tobacco products and new stores were added to the sample if operated within the half mile buffer. To examine trends in tobacco product availability and accessibility at the point of sale, in 2018 we only audited stores for which data were collected in the three previous years, further reducing the sample to 174 stores. From 2019 to 2021, we were able to audit 156 stores, 143 stores and 145 stores respectively. In 2020, we only collected data on tobacco product availability to minimize time in the store during a pandemic.

Using a Qualtrics survey on a smartphone device, trained auditors collected detailed information each year on interior and exterior advertisements of tobacco products, tobacco product availability, and presence of tobacco age of sale signage. In 2021, three data collectors successfully audited 145 of the 156 eligible stores (93%). In addition, 23 stores (15.9%) were independently coded by all three raters to establish reliability. Each store audit took approximately 20 minutes.

Given the shifts in the tobacco marketplace, the survey underwent modifications over the years to include availability of emerging tobacco products and retail policy changes. For example, in 2018 we added questions pertaining to the availability of tobacco age of sale signs in stores. Figure 4 shows the two age of sale signs recorded by auditors that were mandatory and non-mandatory; the yellow “Only 21+” sign was distributed by the New Jersey Department of Health to licensed tobacco retailers just prior to NJ’s Tobacco 21 law becoming effective in November 2017. Also, in 2018 we added items that measured the availability of JUUL products. In 2019, we added items to assess advertising and availability of tobacco-free nicotine pouches. In 2020 we added items to assess availability of flavored and non-flavored disposable e-cigarettes.

Figure 4. Required New Jersey licensed tobacco retailer age of sale (left) and non-mandatory New Jersey Department of Health tobacco age of sale signage (right)



For this project, an "advertisement" was defined as an industry-made sign featuring a company's logo and/or an image of the product. Signs that said "Cigarettes sold here," for example, were not included. Only advertisements that were clearly visible and larger than the size of an index card (3" x 5") were counted. Smaller ads are burdensome for data collectors to locate and count, but more importantly, they may be less noticeable to youth visiting the stores. Figure 5 highlights (in red) examples of tobacco advertisements that would be counted for this project.

Figure 5. Examples of advertisements that would qualify for inclusion

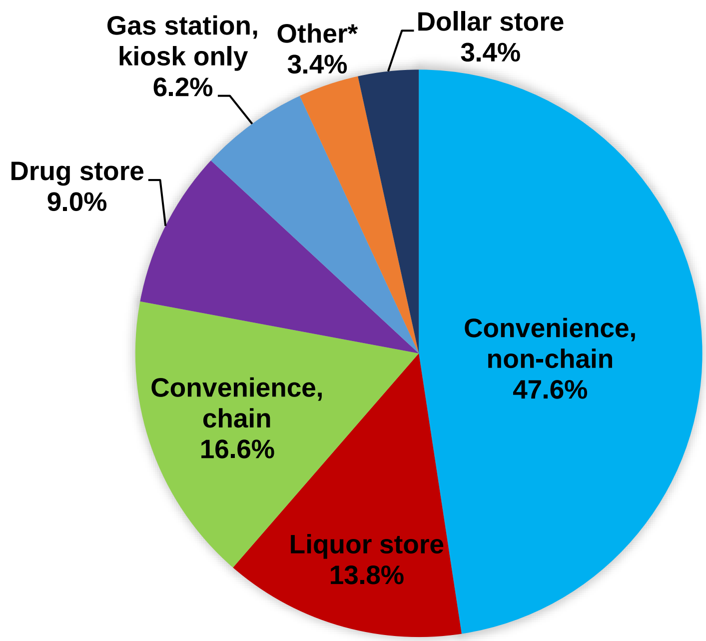
For each of the tobacco products studied in this project (e.g., cigarettes, cigars/cigarillos, smokeless tobacco, e-cigarettes, tobacco-free nicotine pouches, and hookah tobacco), we present data on the prevalence of exterior and interior advertisements and product availability across all stores in the sample. Additionally, we describe differences by store type (i.e., convenience stores, liquor stores, drug stores, gas station kiosks, dollar stores, "other" types of stores) and locality (urban vs. non-urban school districts). Urban districts were defined as municipalities with more than 10,000 residents per square mile (US Census, 2010) [9] and where schools had greater than 50% non-white enrollment.[10]

RESULTS

In 2021, we successfully audited 92.9% of the 156 stores in the cohort sample (n=145). Six stores were permanently closed, and five store owners asked us to leave. This completion rate matches our previous collection efforts in 2015 (89.7%), 2016 (89.7%), 2017 (90.5%), 2018 (93.7%) and 2019 (89.6%). The number of stores audited per school ranged from one to 31, with an average of 5.8 tobacco retailers per high school within a half-mile radius.

Figure 6 displays the distribution of store types in the sample. The majority of stores audited were non-chain convenience stores (47.6%, e.g., independent shops, urban bodegas), followed by chain convenience stores (16.6%; e.g., Wawa, QuickChek, 7-Eleven, with or without gas station attached), liquor stores (13.8%), drug stores (9%), gas station kiosks (6.2%), other stores (3.4%), and dollar stores (3.4%).

Figure 6. Store type %, 2021 (n=145)



*Other includes Tobacco store (2), Supermarket (2), Market (1), Deli (1), Botanica (religious goods store) (1)

Six of the schools in the sample were located in urban districts and the remaining 19 schools were in non-urban districts. Stores located near schools in urban districts (n=86) were more likely to be non-chain convenience stores compared to stores in non-urban districts (n=59). Indeed, nearly two-thirds (66.3%) of urban stores were non-chain convenience stores, compared to 20.3% of non-urban stores. Conversely, stores near non-urban schools were more likely to be chain convenience stores, drug stores, and gas station kiosks (Table 1).

Table 1. Store type by district type, 2021

Store type	**Urban district** N=86 (%)	**Non-urban district** N=59 (%)
Convenience, non-chain	57 (66.3)	12 (20.3)
Liquor store	10 (11.6)	10 (16.9)
Convenience, chain	6 (7.0)	18 (30.5)
Drug store	5 (5.8)	8 (13.6)
Gas station, kiosk only	0 (0.0)	9 (15.3)
Other	4 (4.7)	1 (1.7)
Dollar store	4 (4.7)	1 (1.7)
Total	**86 (100%)**	**59 (100%)**

Cigarettes

Table 2 describes the presence of exterior and interior cigarette ads by store type, as well as their availability. Cigarettes were widely available across all store types. All stores that sold cigarettes also sold menthol varieties. Only 11 stores in the sample (10.3%) did not sell cigarettes, although six of these stores sold other tobacco products. Over a third of all stores had at least one exterior cigarette advertisement, but exterior advertising was more prevalent among non-chain (50.7%) and chain (45.8%) and convenience stores. Notably, no drug stores in the sample had exterior cigarette advertisements although 46.2% had interior cigarette advertising. Interior cigarette advertising was most common in chain convenience stores (95.8%). Only 33.1% of stores had exterior menthol ads, and these ads were most common in chain convenience stores (45.8%) and non-chain convenience stores (43.5%). Exterior menthol cigarette ads were absent in drug stores, dollar stores, and stores categorized as "other." About half (49%) of stores in the sample had interior menthol cigarette advertisements. These ads were present in all store types, and they were most common, by far, in chain convenience stores (79.2%).

Table 2. Presence of cigarette ads and availability in stores by store type, 2021

Store type	Availability %	Exterior ads %	Exterior menthol ads %	Interior Ads %	Interior menthol ads %
Convenience, non-chain (n=69)	91.3	50.7	43.5	58.0	49.3
Convenience, chain (n=24)	95.8	45.8	45.8	83.3	79.2
Liquor store (n=20)	100.0	25.0	20.0	65.0	50.0
Drug store (n=13)	69.2	0.0	0.0	46.2	30.8
Gas station, kiosk only (n=9)	66.7	44.4	33.3	11.1	11.1
Other (n=5)	80.0	0.0	0.0	80.0	20.0
Dollar store (n=5)	100.0	0.0	0.0	100.0	40.0
Overall (n=145)	**89.7**	**37.9**	**33.1**	**61.4**	**49.0**

The volume of exterior and interior cigarette advertisements is summarized in Tables 3 and 4. While only 9.0% of stores had five or more exterior cigarette ads, around 20% of gas station kiosks and chain convenience stores had five or more exterior cigarette ads. Among the other stores with exterior cigarette ads, most had between one to four advertisements. The volume of interior advertisements followed slightly different trends: 28.3% of all stores had five or more interior cigarette ads and 33.1% had one to four ads. Most of the chain convenience stores (75%) had five or more interior ads.

Table 3. Number of exterior cigarette ads in stores by store type, 2021

Store type	0 ads %	1 to 4 ads %	5 or more ads %
Convenience, non-chain (n=69)	49.3	43.5	7.2
Convenience, chain (n=24)	54.2	25.0	20.8
Liquor store (n=20)	75.0	20.0	5.0
Drug store (n=13)	100.0	0.0	0.0
Gas station, kiosk only (n=9)	55.6	22.2	22.2
Other (n=5)	100.0	0.0	0.0
Dollar store (n=5)	100.0	0.0	0.0
Overall (n=145)	**62.1**	**29.0**	**9.0**

Table 4. Number of interior cigarette ads in stores by store type, 2021

Store type	0 ads %	1 to 4 ads %	5 or more ads %
Convenience, non-chain (n=69)	42.0	39.1	18.8
Convenience, chain (n=24)	16.7	8.3	75.0
Liquor store (n=20)	35.0	45.0	20.0
Drug store (n=13)	53.8	23.1	23.1
Gas station, kiosk only (n=9)	88.9	0.0	11.1
Other (n=5)	20.0	80.0	0.0
Dollar store (n=5)	0.0	60.0	40.0
Overall (n=145)	**38.6**	**33.1**	**28.3**

Figures 7 and 8 highlight differences in the prevalence and volume of cigarette advertising in stores in urban localities versus non-urban localities. Stores in non-urban localities had a slightly higher prevalence of exterior and interior menthol advertisements (Figure 7). These stores also had a greater prevalence of interior cigarette ads, while stores in urban localities had slightly higher exterior ad prevalence. Although stores in urban localities had exterior ads, stores in non-urban localities had a higher volume of ads on both the exterior and interior. For example, 17% of stores in non-urban localities had five or more exterior cigarette ads, while only 3.5% of stores in urban localities displayed five or more exterior cigarette ads. Similarly, nearly half of stores in non-urban localities had five or more interior cigarette ads, compared to less than a fifth of stores in urban localities.

Figure 7. Presence of cigarette ads in stores, by district type (%), 2021

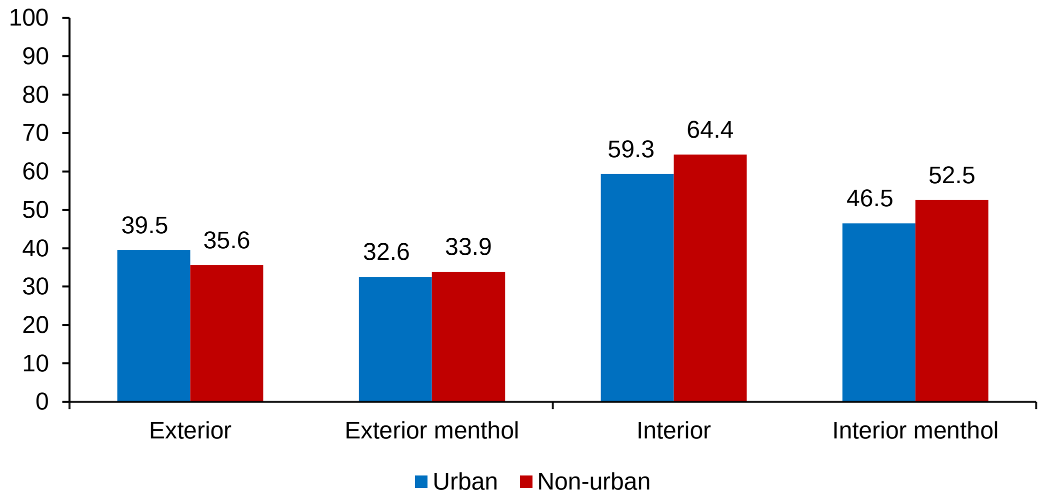
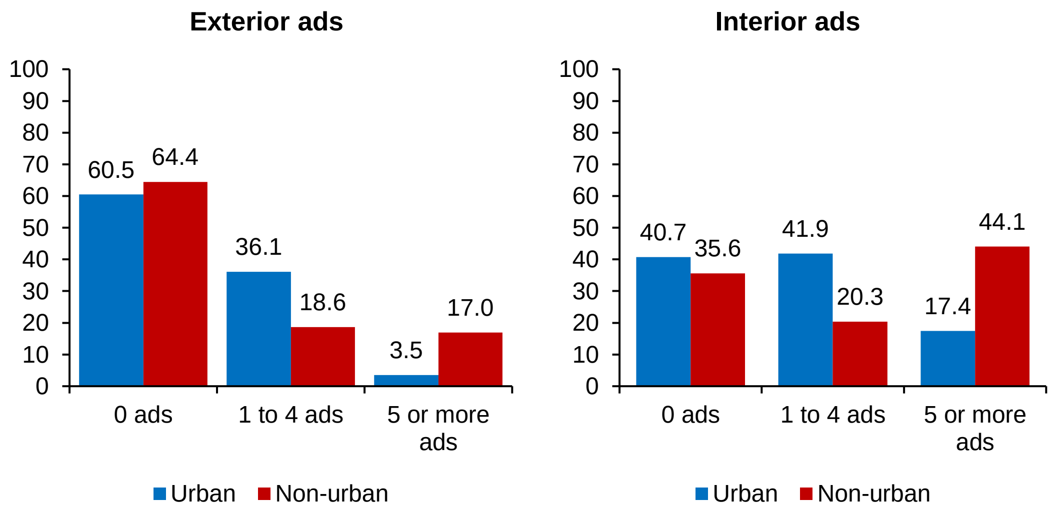


Figure 8. Number of exterior and interior cigarette ads in stores, by district type (%), 2021



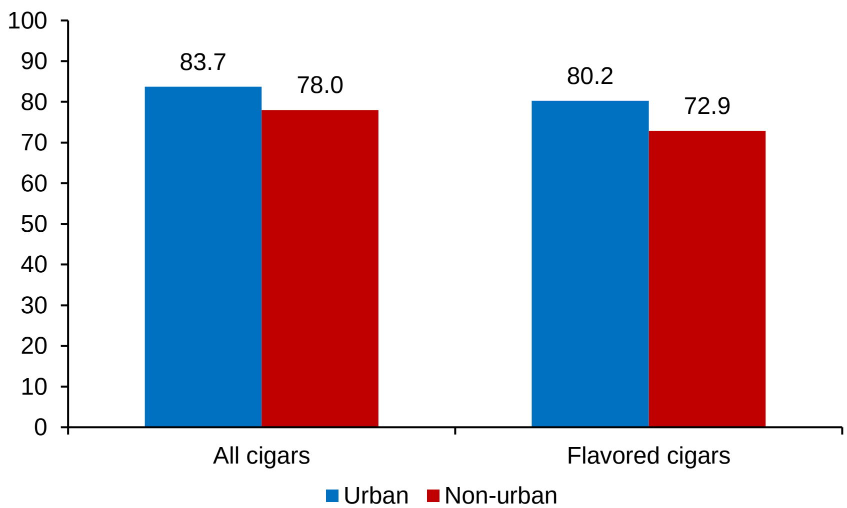
Cigars/cigarillos

Cigar products were the second most common tobacco product found in stores following cigarettes. As shown in Table 5, 81.4% of all stores sold cigars and the majority of those stores offered flavored varieties (77.2%). Cigar availability was highest in both chain and non-chain convenience stores. The availability of both flavored and non-flavored cigars was higher in stores located in urban areas. (Figure 9).

Table 5. Cigar/cigarillo availability by store type, 2021

Store type	Cigar availability %	Flavored cigar availability %
Convenience, non-chain (n=69)	91.3	88.4
Convenience, chain (n=24)	95.8	95.8
Liquor store (n=20)	85.0	70.0
Drug store (n=13)	30.8	30.8
Gas station, kiosk only (n=9)	44.4	33.3
Other (n=5)	60.0	60.0
Dollar store (n=5)	80.0	80.0
Overall (n=145)	**81.4**	**77.2**

Figure 9. Cigar and flavored cigar availability by district type %, 2021



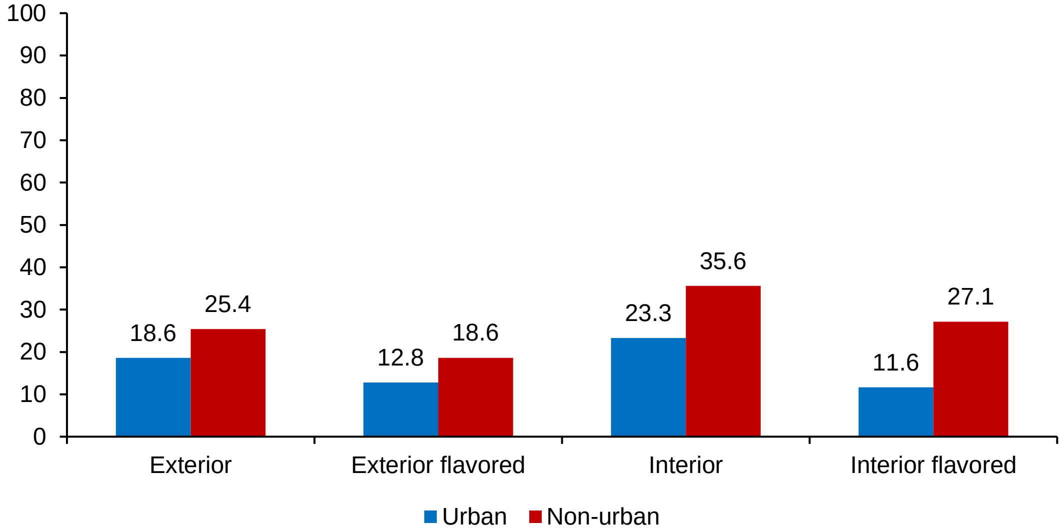
Cigars were the second most advertised tobacco product in stores. Cigar advertisements, however, were substantially less prevalent than cigarette ads. Only 21.4% of stores had at least one exterior cigar ad and 28.3% displayed at least one interior cigar ad (Table 6). Chain convenience stores had the highest prevalence for exterior cigar ads (29.2%) while interior cigar ads were most prevalent in dollar stores (60.0%) and chain convenience stores (50%). Advertisements for flavored cigars were less common, as each store type had a lower prevalence of exterior and interior flavored cigar ads when compared to overall cigar ads. Exterior flavored cigar ads were most common in chain-convenience stores (25%), and these ads were absent from liquor stores, dollar stores, drug stores, and “other” stores. Interior flavored cigar ads were also most common in chain convenience stores (41.7%) and were absent from drug stores and “other” stores.

Table 6. Presence of cigar/cigarillo ads in stores by store type, 2021

Store type	Exterior ads %	Exterior flavored ads %	Interior ads %	Interior flavored ads %
Convenience, non-chain (n=69)	27.5	21.7	24.6	17.4
Convenience, chain (n=24)	29.2	25.0	50.0	41.7
Liquor store (n=20)	10.0	0.0	35.0	10.0
Drug store (n=13	0.0	0.0	0.0	0.0
Gas station, kiosk only (n=9)	22.2	11.1	11.1	11.1
Other (n=5)	20.0	0.0	20.0	0.0
Dollar store (n=5)	0.0	0.0	60.0	20.0
Overall (n=145)	**21.4**	**15.2**	**28.3**	**17.9**

A comparison of stores by district type revealed that exterior and interior cigar advertisements were more prevalent in stores located in urban areas (Figure 10). Exterior ads for *flavored* cigars/cigarillos were also more prevalent in stores located in non-urban areas (18.6% vs. 12.8%).

Figure 10. Presence of cigar ads in stores by district type %, 2021



Smokeless Tobacco

As shown in Table 7, smokeless tobacco (including snus and snuff) was sold in 24.1% of all stores in the sample but was most commonly available in chain convenience stores (79.2%). The product was much less accessible in all other store types.

Table 7. Smokeless tobacco availability in stores by store type, 2021

Store type	Smokeless tobacco availability %
Convenience, non-chain (n=69)	17.4
Convenience, chain (n=24)	79.2
Liquor store (n=20)	5.0
Drug store (n=13)	7.7
Gas station, kiosk only (n=9)	11.1
Other (n=5)	0.0
Dollar store (n=5)	20.0
Overall (n=145)	**24.1**

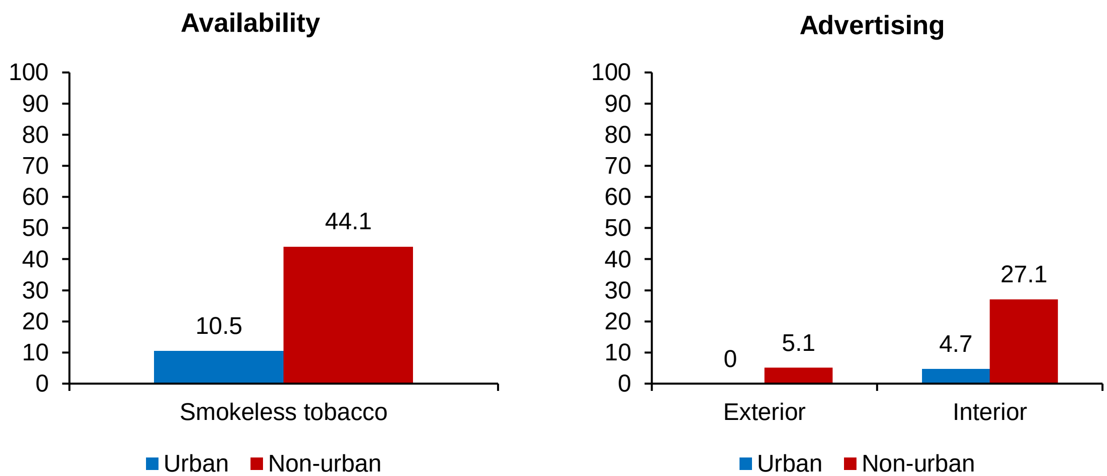
Table 8 presents the prevalence of smokeless tobacco advertising by store type. Overall, exterior ads for smokeless tobacco were rare (2.1% of stores) but most prevalent in chain convenience stores (8.3%). Interior smokeless tobacco ads were more prevalent (13.8%) and more often found in chain convenience stores (66.7%).

Table 8. Smokeless tobacco ads in stores by store type, 2021

Store type	Exterior ads %	Interior ads %
Convenience, non-chain (n=69)	1.4	4.3
Convenience, chain (n=24)	8.3	66.7
Liquor store (n=20)	0.0	0.0
Drug store (n=13)	0.0	0.0
Gas station, kiosk only (n=9)	0.0	0.0
Other (n=5)	0.0	0.0
Dollar store (n=5)	0.0	20.0
Overall (n=145)	**2.1**	**13.8**

Exterior and interior smokeless tobacco ads were rare in stores located in urban districts. For example, in urban districts, there were no exterior ads and only 4.7% of stores had interior smokeless tobacco ads. Interior smokeless tobacco ads were over five times more prevalent in stores in non-urban districts compared to stores in urban districts. Following this trend, smokeless tobacco was available in only 10.5% of stores in urban districts and 44.1% of stores in non-urban districts. Correspondingly, smokeless tobacco was substantially more advertised in non-urban compared to urban stores (Figure 11).

Figure 11. Advertising and availability of smokeless tobacco in stores by district type %, 2021



Tobacco-Free Nicotine Pouches

Tobacco-free nicotine pouches are a relatively new product, increasing in popularity. Overall, 17.9% of stores sold nicotine pouches and were most available in chain convenience stores (70.8%).

Table 9. Tobacco-free nicotine pouch availability in stores by store type, 2021

Store type	Nicotine pouch availability %
Convenience, non-chain (n=69)	10.1
Convenience, chain (n=24)	70.8
Liquor store (n=20)	0.0
Drug store (n=13)	15.4
Gas station, kiosk only (n=9)	0.0
Other (n=5)	0.0
Dollar store (n=5)	0.0
Overall (n=145)	**17.9**

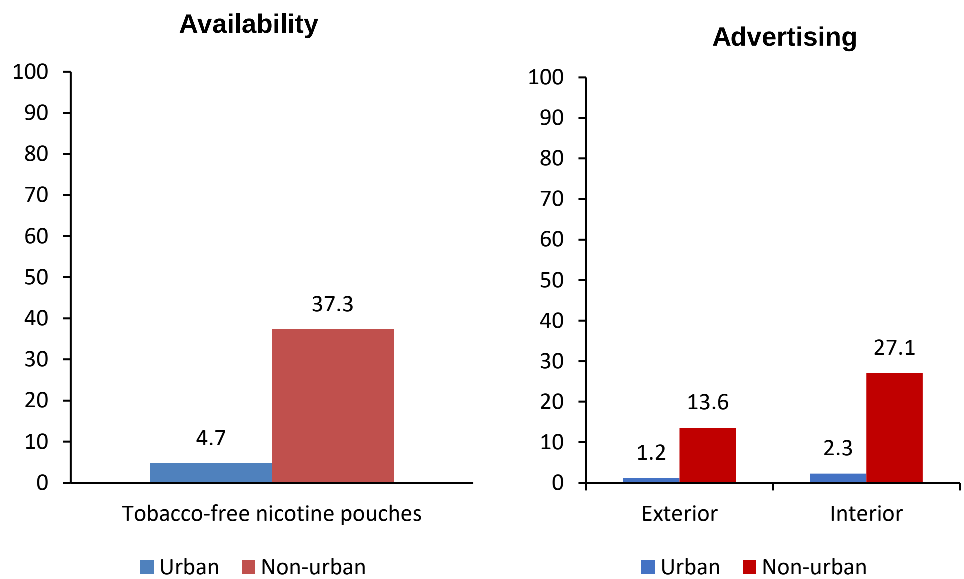
Overall, the presence of exterior ads for nicotine pouches (12.4%) was twice as much as interior ads (6.2%). Both exterior and interior nicotine pouch ads were most prevalent in chain convenience stores. For example, interior ads were found in more than half (62.5%) of chain convenience stores, whereas other store types had very few ads (Table 10).

Table 10. Tobacco-free nicotine pouch advertising by store type, 2021

Store type	Exterior ads %	Interior ads %
Convenience, non-chain (n=69)	1.4	2.9
Convenience, chain (n=24)	33.3	62.5
Liquor store (n=20)	0.0	0.0
Drug store (n=13)	0.0	7.7
Gas station, kiosk only (n=9)	0.0	0.0
Other (n=5)	0.0	0.0
Dollar store (n=5)	0.0	0.0
Overall (n=145)	**6.2**	**12.4**

Figure 12 presents the availability and advertising of tobacco-free nicotine pouches by district type. Tobacco-free nicotine pouches were substantially more available in stores located in non-urban districts. In contrast, both availability and advertising were both extremely uncommon among urban district stores. For example, less than 5% of stores in urban districts sold tobacco free nicotine pouches or advertised such products.

Figure 12. Availability and advertising of nicotine pouches in stores by district type %, 2021



E-cigarettes

E-cigarettes were available in more than one-third of all stores audited (35.9%) (Table 11). Flavored e-cigarettes were available in 22.1% of stores. E-cigarettes were most available in chain convenience stores (87.5%) and non-chain convenience stores (36.2%). Flavored e-cigarettes were available in 75% of the non-chain convenience stores that sold e-cigarettes compared to slightly less than half of the chain convenience stores that sold e-cigarettes.

Table 11. Availability of e-cigarettes and flavored e-cigarettes by store type, 2021

Store type	E-cig availability %	Flavored e-cig availability %
Convenience, non-chain (n=69)	36.2	27.5
Convenience, chain (n=24)	87.5	41.7
Liquor store (n=20)	10.0	5.0
Drug store (n=13)	7.7	0.0
Gas station, kiosk only (n=9)	33.3	22.2
Other (n=5)	0.0	0.0
Dollar store (n=5)	0.0	0.0
Overall (n=145)	**35.9**	**22.1**

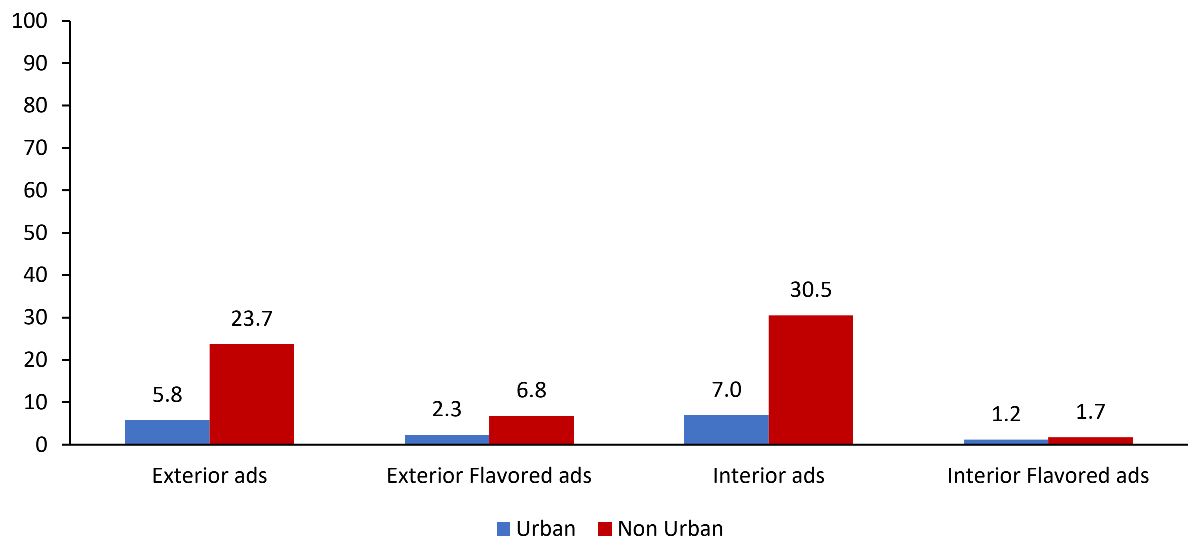
13.1% of all stores had exterior e-cigarette advertisements, and 16.6% had interior advertisements. Of these, exterior and interior advertisements for e-cigarettes were most common in chain convenience stores. Advertisements for flavored e-cigarettes were rare and most prevalent in chain convenience stores. Only 4.1% and 1.4% of all stores had exterior and interior flavored cigarette ads, respectively (Table 12).

Table 12. Presence of e-cigarette advertising by store type, 2021

Store type	Exterior ads %	Exterior flavored ads %	Interior ads %	Interior flavored ads %
Convenience, non-chain (n=69)	14.5	4.3	13.0	0.0
Convenience, chain (n=24)	29.2	8.3	50.0	8.3
Liquor store (n=20)	0.0	0.0	10.0	0.0
Drug store (n=13)	0.0	0.0	0.0	0.0
Gas station, kiosk only (n=9)	22.2	11.1	11.1	0.0
Other (n=5)	0.0	0.0	0.0	0.0
Dollar store (n=6)	0.0	0.0	0.0	0.0
Overall (n=145)	**13.1**	**4.1**	**16.6**	**1.4**

E-cigarette advertising was more prevalent in stores located in non-urban settings (Figure 13). The prevalence of exterior e-cigarette advertising in stores in non-urban settings (23.7%) was more than four times that of urban stores (5.8%). Interior e-cigarette advertising in stores in non-urban localities (30.5%) was over four times more prevalent than in stores in urban localities (7.0%). Interior flavored e-cigarette advertisements were similar between urban and non-urban stores. Additionally, the availability of e-cigarette products was substantially greater in stores in non-urban areas. Less than a third of stores in urban areas sold any type of e-cigarette, compared to 47.5% of stores in non-urban areas.

Figure 13. Presence of e-cigarette ads in stores by district type %, 2021



Disposable e-cigarettes were sold in a little over one-fourth of all stores (Table 13). These products were most common in chain convenience stores, as 54.2% of these stores sold disposable e-cigarettes. Product availability also differed in stores by district type (Table 14). Disposable e-cigarettes were only sold in 22.1% of stores in urban localities while 35.6% of stores in non-urban areas sold these products. Also, a wider variety of store types sold disposable e-cigarettes in non-urban areas than in urban areas (Table 14).

Table 13. Availability of disposable e-cigarettes by store type, 2021

Store type	**Disposable e-cigarette availability** %
Convenience, non-chain (n=69)	30.4
Convenience, chain (n=24)	54.2
Liquor store (n=20)	10.0
Drug store (n=13)	7.7
Gas station, kiosk only (n=9)	33.3
Other (n=5)	0.0
Dollar store (n=5)	0.0
Overall (n=145)	**27.6**

Table 14. Availability of disposable e-cigarettes by store and district type, 2021

Store type	Urban districts %	Non-urban districts %
Convenience, non-chain	26.3	50.0
Convenience, chain	66.7	50.0
Liquor store	0.0	20.0
Drug store	0.0	12.5
Gas station, kiosk only	0.0	33.3
Other	0.0	0.0
Dollar store	0.0	0.0
Overall	**22.1**	**35.6**

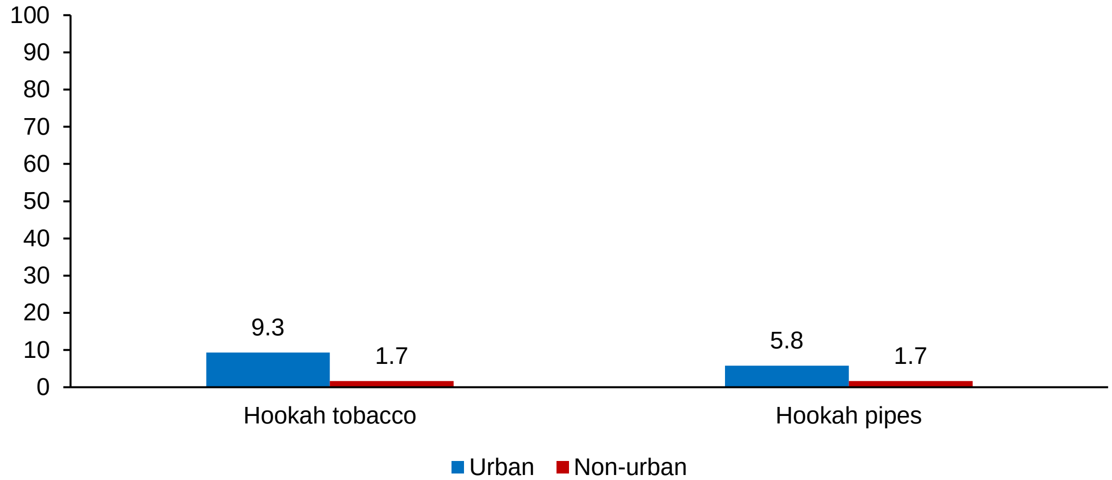
Hookah

Hookah tobacco was available in 6.2% of all stores, while hookah pipes were available in 4.1% of all stores (see Table 15). The only stores that sold hookah tobacco were chain convenience stores and non-chain convenience stores, and chain convenience stores were nearly twice as likely to carry hookah tobacco than non-chain convenience stores. Hookah pipes were only available in chain convenience stores, non-chain convenience stores, and drug stores. Figure 14 illustrates the differences in hookah tobacco and hookah pipe availability in urban and non-urban stores. Hookah tobacco and pipes were substantially more available in urban stores than non-urban stores.

Table 15. Hookah tobacco and hookah pipe availability by store type, 2021

Store type	Hookah tobacco availability %	Hookah pipe availability %
Convenience, non-chain (n=69)	8.7	4.3
Convenience, chain (n=24)	12.5	8.3
Liquor store (n=20)	0.0	0.0
Drug store (n=13)	0.0	7.7
Gas station, kiosk only (n=9)	0.0	0.0
Other (n=5)	0.0	0.0
Dollar store (n=5)	0.0	0.0
Overall (n=145)	**6.2**	**4.1**

Figure 14. Hookah tobacco and hookah pipe availability in stores by district type %, 2021



Compliance with New Jersey Tobacco Age of Sale Signs

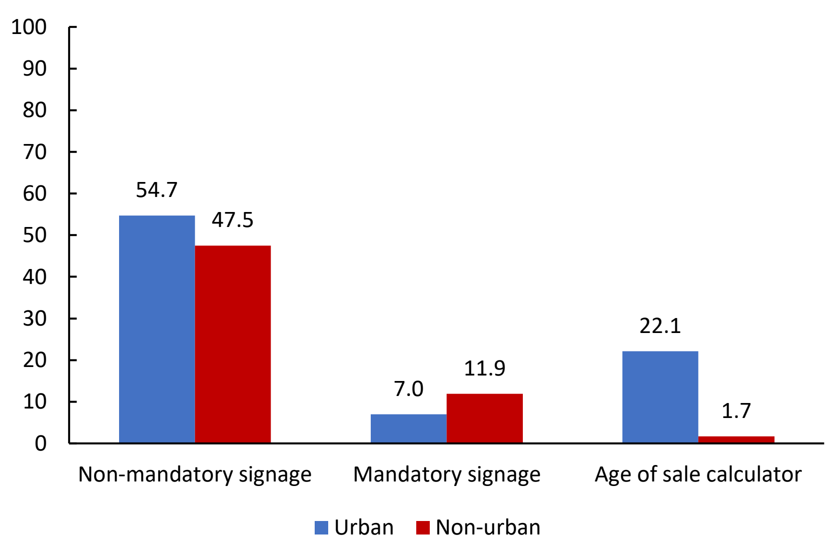
As shown in Table 16, the presence of mandatory tobacco age of sale signs were found in less than one out of 10 stores. Drug stores (23.1%) had the highest percentage of compliance with mandatory signage. This signage was absent in all the sampled gas stations, dollar stores, and other stores. Non-mandatory age of sale signs provided by the New Jersey Department of Health were observed in slightly more than half of all stores. Dollar stores (80%) and liquor stores (70%) had the highest percentage of non-mandatory signage, and chain convenience stores had the lowest percentage (25%). The age of sale calculator was observed in 13.8% of all stores. These were most commonly found in non-chain convenience stores (20.3%) and liquor stores (20%). Similar to the mandatory tobacco signage, the age of sale calculator was not observed in gas stations, dollar stores, and uncategorized stores in the sample.

Table 16. New Jersey tobacco age of sale signage by store type, 2021

Store type	Non-mandatory signage %	Mandatory signage %	Age of sale calculator %
Convenience, non-chain (n=69)	58.0	8.7	20.3
Convenience, chain (n=24)	25.0	8.3	4.2
Liquor store (n=20)	70.0	10.0	20.0
Drug store (n=13)	30.8	23.1	7.7
Gas station, kiosk only (n=9)	44.4	0.0	0.0
Other (n=5)	60.0	0.0	0.0
Dollar store (n=5)	80.0	0.0	0.0
Overall (n=145)	**51.7**	**9.0**	**13.8**

Stores in urban settings (54.7%) had a greater prevalence of non-mandatory New Jersey age of sale signage than stores in non-urban settings (47.5%). Age calculators were also more likely to be found in stores that were located in stores in urban areas (22.1%) than in stores that were in non-urban areas (1.7%). However, mandatory age of sale signage had a greater presence in stores in non-urban (11.9%) versus urban areas (7%) (see Figure 15 below).

Figure 15. New Jersey tobacco age of sale signage in stores by district type %, 2021



Changes in tobacco advertisements, 2019-2021

Audits were successfully repeated in 135 stores between 2019 and 2021. Table 17 highlights changes in the prevalence of product advertising over these years. Advertising was not tracked in 2020, so these were not presented. Advertising for cigarettes decreased from 2019 to 2021, with exterior ads seeing the largest drop (-10.4 percentage points). Overall exterior cigar advertisement remained constant, but exterior flavored cigar advertising increased very slightly (+0.7 percentage points). There were notable decreases in the interior advertising of cigar/cigarillo products, as interior cigar ads decreased by 5.2 percentage points and interior flavored cigar ads decreased by 9.6 percentage points. The prevalence of smokeless tobacco advertising decreased slightly during this time period. Exterior smokeless tobacco advertising decreased by less than one percentage point and interior ads decreased by one and a half. Tobacco-free nicotine pouches saw notable increases in advertising, as exterior ads increased by 4.5 percentage points and interior ads increased by 12.6 percentage points. E-cigarettes saw a substantial decrease in advertisements. Exterior e-cigarette ads decreased by 8.2 percentage points while exterior flavored e-cigarette ads decreased by 5.2, putting the 2021 advertising prevalence at around half of that in 2019. Interior e-cigarette ads dropped by 3.7 percentage points while interior flavored e-cigarette ads dropped by 4.4. Interior flavored e-cigarette advertisements were present in 1.5% of stores in 2021 compared to 5.9% of stores in 2019.

Table 17. Changes in tobacco product advertising between 2019 and 2021 (n=135)

	2019 %	2021 %	Percentage Point Change 2019 vs. 2021
Cigarettes			
Exterior cigarette ads	51.1	40.7	-10.4
Exterior menthol cigarette ads	42.2	35.6	-6.6
Interior cigarette ads	70.4	64.4	-6.0
Interior menthol cigarette ads	57.8	51.1	-6.7
Cigars			
Exterior cigar ads	21.5	21.5	0.0
Exterior flavored cigar ads	14.1	14.8	+0.7
Interior cigar ads	34.1	28.9	-5.2
Interior flavored cigar ads	27.4	17.8	-9.6
Smokeless tobacco			
Exterior smokeless ads	2.2	2.2	-0.6
Interior smokeless ads	16.3	14.8	-1.5
Tobacco free nicotine pouches			
Exterior nicotine pouch ads	2.2	6.7	+4.5
Interior nicotine pouch ads	0.7	13.3	+12.6
E-cigarettes			
Exterior e-cig ads	21.5	13.3	-8.2
Exterior flavored e-cig ads	9.6	4.4	-5.2
Interior e-cig ads	20.7	17.0	-3.7
Interior flavored e-cig ads	5.9	1.5	-4.4

Changes in product availability, 2019-2021

Table 18 displays changes in product availability between 2019 and 2021. The availability of cigarettes, cigars, and flavored cigars remained relatively high, but there was also a decrease in the availability of these products across the three-year period. Mirroring trends in product advertising, the availability of e-cigarette product decreased in 2021including menthol, mint, and other flavored e-cigarettes. However, flavored e-cigarette products appear to have rebounded between 2020 and 2021, from a larger decrease in availability between 2019 and 2020.

The availability of smokeless tobacco, hookah tobacco, and tobacco-free nicotine pouches all increased between 2019 and 2021. Availability of tobacco-free nicotine pouches increased the most (+12.6 percentage points), followed by smokeless tobacco (+3.7 percentage points). Hookah tobacco had the smallest increase in availability, seeing a 1.5 percentage point growth. Some stores in this sample stopped selling tobacco all together; the number of stores that no longer sold tobacco rose by 3.7 percentage points from 2019 to 2021.

Table 18. Changes in product availability between 2019-2021 (n=135)

Product type	2019 %	2020 %	2021 %	Percentage Point Change 2019 vs. 2021
Cigarettes				
Cigarettes	98.5	99.3	92.6	-5.9
NAS cigarettes	46.7	53.3	45.9	-0.8
Cigars/cigarillos				
Cigars/cigarillos	91.1	91.9	85.2	-5.9
Flavored cigars/cigarillos	90.4	88.9	81.5	-8.9
Smokeless tobacco				
Moist snuff SLT	21.5	28.9	25.2	+3.7
Non flavored SLT	20.0	21.5	25.9	+5.9
Wintergreen SLT	21.5	28.1	23.0	+1.5
Flavored SLT	19.3	20.7	14.8	-4.5
Tobacco-free nicotine pouches				
Nicotine pouches	6.7	19.3	19.3	+12.6
E-cigarettes				
Any e-cigarette	45.2	37.0	37.0	-8.2
Menthol e-cigarettes	42.2	12.6	19.3	-22.9
Mint e-cigarettes	43.7	10.4	19.3	-24.4
Flavored e-cigarettes	40.0	18.5	22.2	-17.8
Hookah				
Hookah tobacco	3.7	0.0	5.2	+1.5
Hookah pipe	3.0	0.0	3.0	0.0
No longer sells tobacco				
No tobacco sold	0.7	0.0	4.4	+3.7

CONCLUSION AND RECOMMENDATIONS

Combustible tobacco remains the most available and advertised product in licensed tobacco retailers near high schools. Cigarettes were by far the most available and advertised tobacco product across all stores. Chain convenience stores often have a high number of cigarette ads (5 or more) which may be a function of the retail space available in these types of stores.

Cigars and cigarillos were the second most available and advertised tobacco product. Most stores that sold cigars/cigarillos had a flavored variety available. Although both flavored and non-flavored cigars/cigarillos were slightly more available in urban areas, advertising for both products were more often found in non-urban areas. Availability and advertising of cigars/cigarillos is especially concerning because cigars or cigarillos provide a cheaper alternative to cigarettes – it is not uncommon to find a two pack of cigars selling for as little as 99 cents – making them potentially more appealing to price-sensitive buyers such as youth. In addition, it will also be important to continue to monitor cigar/cigarillo advertising and availability in the context of recreational marijuana legalization, approved by New Jersey voters in a 2020 ballot measure, given the frequent co-marketing and co-use of marijuana with cigarillos.[11,12]

Non-combustible tobacco products were more available and advertised in non-urban areas. Advertising and availability of smokeless tobacco and tobacco-free nicotine pouches were similar, with smokeless tobacco being slightly more advertised and available. These products were predominantly sold in chain convenience stores, more frequently located in non-urban areas. E-cigarettes were the most available and advertised non-combustible tobacco product and mimicked urban vs non-urban trends of the other non-combustible products. Although availability of menthol, mint, and other flavored e-cigarettes substantially declined since 2019, these products remain available in over 20% of stores.

Another notable difference in tobacco product advertising between urban and non-urban stores was the higher number of both exterior and interior ads in non-urban stores. Advertising prevalence for all tobacco products was substantially greater in non-urban stores as well. Stores near urban schools were more likely to be independently owned ("mom and pop") stores or bodegas, which may not heavily advertise tobacco products given space constraints.

Our observations of New Jersey tobacco age of sale signage found that slightly over half of stores (51.7%) displayed the non-mandatory, but more recently distributed, age of sale signs provided by the New Jersey Department of Health. However, New Jersey age of sale signs required by law, as well as voluntary FDA age calculators were observed in less than 15% of stores.

Comparing tobacco product advertising prevalence between 2019 and 2021, we found declines in advertising of all tobacco categories except tobacco-free nicotine pouches. Exterior and interior advertisements for tobacco-free nicotine pouches increased significantly between 2019 and 2021, corresponding to wider distribution of emerging brands in these years. We found similar trends in tobacco product availability with declines in all product availability except tobacco-free nicotine pouches and some smokeless tobacco products. Again, we saw increased availability of tobacco-free nicotine pouches between 2019 and 2021.

This report provides important findings about the accessibility and promotion of various tobacco products near New Jersey high schools. The recent ban on the sale of flavored e-cigarettes in New Jersey, including menthol and mint, appeared to have the desired result of reducing availability of such products. However, flavored e-cigarette products were not eliminated and still found for sale in more than 20% of licensed tobacco retailers in our sample in 2021, which is an increase from 2020. The enactment of the law in April 2020, during the peak of the global COVID-19 pandemic, may have hampered efforts to enforce the new law. However, with the gradual reopening of workplaces and retailers in the latter half of 2020 and 2021, it is unclear if enforcement of the e-cigarette flavor ban was implemented.

In April 2021, U.S. Food and Drug Administration (FDA) announced that it will initiate a notice and comment rulemaking process to ban menthol-flavored cigarettes and all characterizing flavors in cigars and cigarillos within the following year. As such, it will be important to continue to monitor the advertising and availability of menthol cigarettes. In addition, continued monitoring of all product categories will allow us to see how the tobacco industry responds to such a ban and potentially identify shifts in the marketplace in terms of product advertising and availability, particularly in areas where youth spend time (e.g., near schools).

RECOMMENDATIONS

Given recent government and industry action over the last two years, continued surveillance of point-of-sale tobacco product availability and advertising remains critically important. New Jersey led the nation by enacting several tobacco control policies well ahead of other states and localities including increased age of sale, restricting flavors in all e-cigarettes, and limiting coupon redemption for all tobacco products but it falls short in ensuring uniform compliance with such policies. Despite the state's ban, the availability of flavored e-cigarettes, while reduced, endures. For such laws to effectively deter tobacco distributors and retailers, they must know the laws exist and believe these laws are enforced. Retailer education as well as strong and consistent enforcement of the law is necessary. The competing priorities of state and local health agencies, including the COVID-19 pandemic response, have likely posed substantial challenges to policy dissemination and implementation. However, tobacco sales also increased by 13% during lockdown orders for COVID-19.[13] Thus, reducing the appeal and access to tobacco products should be prioritized as a means to sustain and improve the health of New Jerseyans.

If we hope to make further reductions in youth and adult tobacco use, we must work to change the tobacco retail environment with a focus on the most dangerous products, cigarettes and cigars. There are various place and product-based strategies shown to be effective in reducing youth access including reducing tobacco retailer density (e.g., by volume or proximity to schools), store-type sales restrictions (i.e., selling only in adult-only facilities, banning sales in pharmacies, etc.), restrictions on cigar flavors and packaging, and increased tobacco taxes. The industry continues to innovate and offer a variety of flavors, packaging, and product types, particularly in the area of cigars. Efforts to reduce cigar use should keep pace with other strong efforts to reduce cigarette use including high prices, minimum packaging, and flavor restrictions.

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