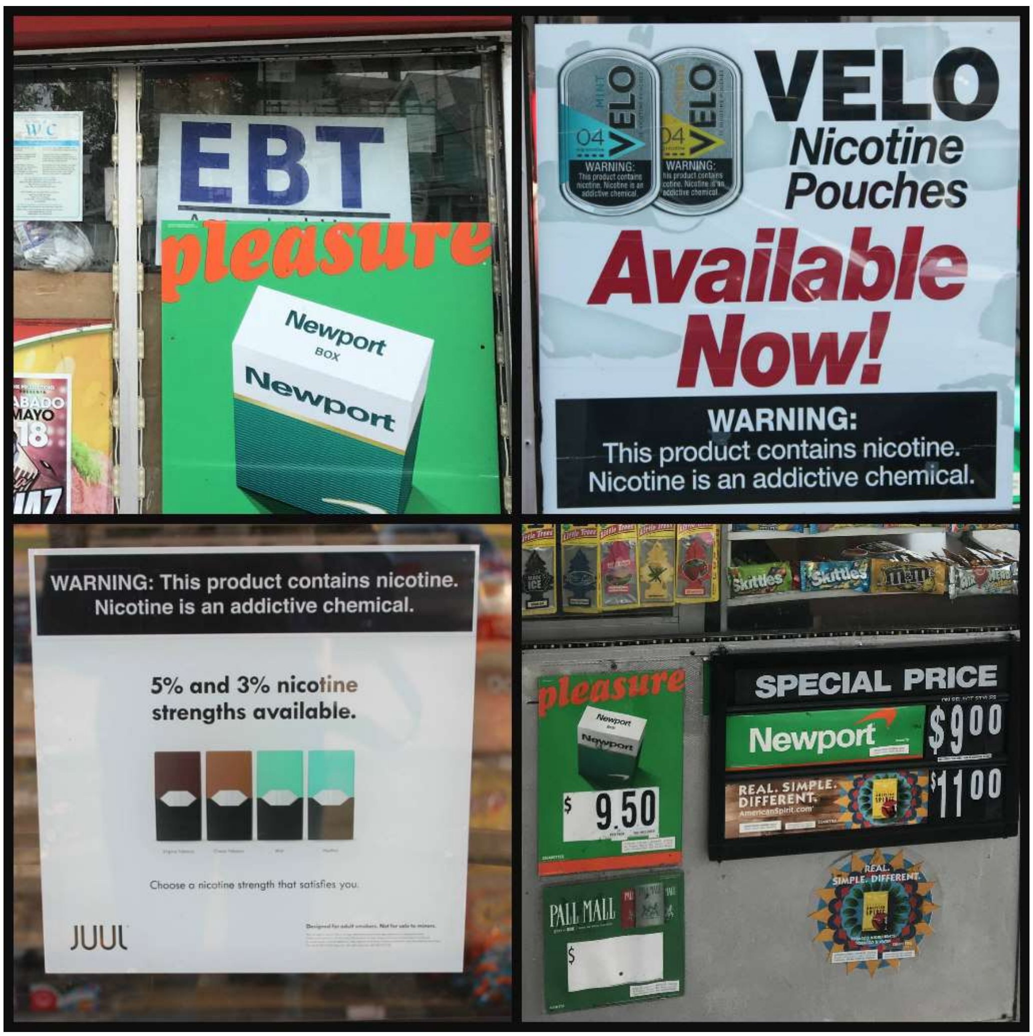
New Jersey Tobacco Point-of-Sale Project

February 2020



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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 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 (POS). For example, in 2017, cigarette and smokeless tobacco companies spent more than $9 billion on product marketing, most of which occurred in the retail setting.[3,4] Further, in 2017, the tobacco industry spend $48.5 million on point of sale materials (excluding outdoor advertising).[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 other tobacco products, such as cigars/cigarillos, smokeless tobacco, electronic cigarettes (e-cigarettes), and hookah remains high (Figure 2, below, describes these non-cigarette tobacco products). Data from the 2018 New Jersey Youth Tobacco Survey (NJYTS) showed that 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, 4% were current cigar/cigarillo smokers, and 2.7%

were current users of smokeless tobacco.[7] Particularly alarming is the growth in use of e-cigarettes from 9.6% in 2016 to 17.8% in 2018.[7]

The promotion of non-cigarette tobacco products in retail settings is understudied, but emerging evidence suggests that these products (e.g., e-cigarettes, cigars/cigarillos, smokeless tobacco) 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 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, and Camel Snus. Emerging products inlude a tobacco free pouch that contains nicotine (e.g., Zyn).	
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. Popular brands include JUUL, Blu, Logic, Vuse and Mark Ten.	

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.	

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

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=26) between 2015 and 2019. We present cross sectional (2019) and longitudinal (2015-2019) analyses that include 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).

METHODS

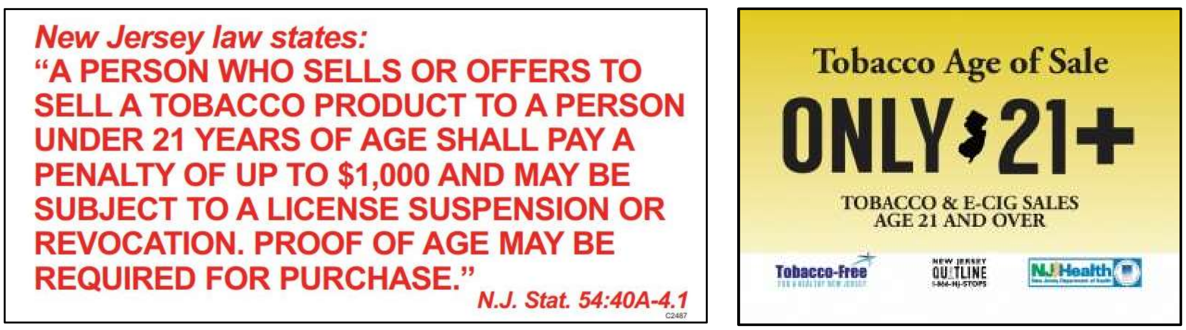
In 2015, we mapped the locations of the 41 high schools participating in the 2014 NJYTS and drew a half-mile buffer around each school. Half mile (2,640 ft.) was chosen as the cutoff based on the premise that this was the most convenient distance that students would travel before, during, and after school activities. Of the 41 schools participating in the 2014 NJYTS, 15 (36.6%) had no tobacco retailers within a half-mile radius and these were not visited by research staff. 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.

We attempted audits each year at all 211 licensed tobacco retailers identified in the original sample in 2015 until 2019. Between 2015 and 2019, we were able to collect data from a cohort of retailers (n=156 stores). In 2019, we resampled stores based on the 2018 NJ Youth Tobacco Survey. We selected 230 stores within proximity to 24 NJ high schools. There were 19 retailers that were included both in the cohort sample (2015-2019) and the new sample (2019). To describe trends in the point of sale environment, our analysis is centered on the data from the cohort sample (2015-2019). This allows us to examine changes in tobacco product availability and advertising. We also describe trends in our new sample (2019), that features a greater number of stores in urban areas and maps to the locations of high schools participating in the 2018 NJ YTS.

Data was collected using a Qualtrics survey on a smartphone device, two trained auditors collected detailed information each year on interior and exterior advertisements of tobacco products, tobacco product availability, and presence of New Jersey tobacco age of sale signage. In 2019, each store audit took approximately 10 minutes.

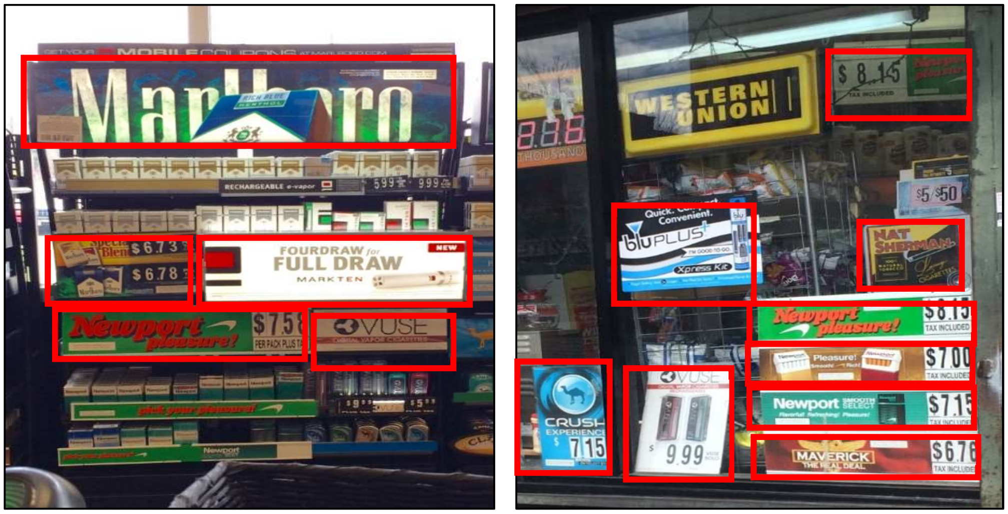
Given shifts in the tobacco marketplace, we modified the survey over the years to capture availability of emerging products and retail policy changes. For example, in 2018 we added questions pertaining to the availability of tobacco age of sale signs in stores given the increased age of sale effective November 2017 and corresponding efforts to educate retailers. Figure 4 shows the two age of sale signs recorded by auditors that were mandatory and non-mandatory. In 2018 we also added items to measure availability of JUUL products given its growth among branded e-cigarette products. By November 2018, JUUL accounted for 76% of the market share of the electronic nicotine delivery systems (ENDS) sales.[10] In 2019, several tobacco free nicotine pouches were launched and so questions were added to assess their availability in the marketplace.

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 were counted for this project



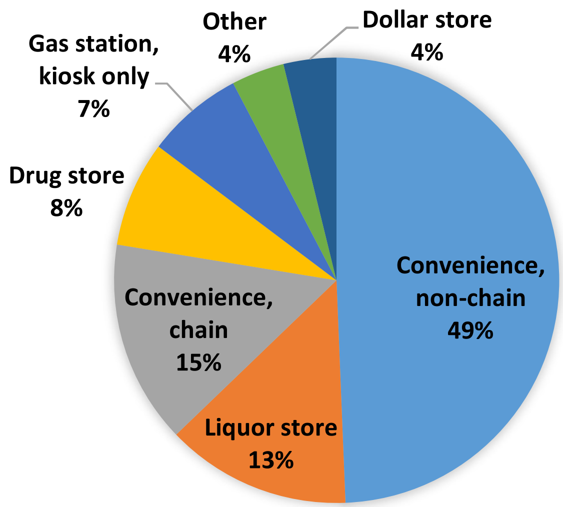
For each of the tobacco products studied in this project (e.g., cigarettes, cigars/cigarillos, smokeless tobacco, e-cigarettes, JUUL products, and hookah tobacco), we present data on the prevalence of exterior and interior advertisements and product availability across all stores in the sample. Additionally, 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) [12] and whose schools have greater than 50% non-white enrollment.[13]

RESULTS

In 2019, we successfully audited 89.6% of the 163 stores in the cohort sample (n=156). Seven stores were closed. This completion rate matches our previous collection efforts in 2015 (89.7%), 2016 (89.7%), 2017 (90.5%), and 2018 (93.7%). The number of stores audited per school ranged from one to 36, with an average of 6.3 tobacco retailers per high school.

Figure 6 displays the distribution of store types in the sample. The majority of stores audited were non-chain convenience stores (49%, e.g., independent shops, urban bodegas), followed by chain convenience stores (15%; e.g., Wawa, QuickChek, 7-Eleven, with or without gas station attached), liquor stores (13%), drug stores (8%), gas station kiosks (7%), other stores (4%), and dollar stores (4%).

Figure 6. Store type, % (n=156), 2019



*Note: Other included tobacco store (n=2), supermarket (n=2), market (n=1), deli (n=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=63) were more likely to be non-chain convenience stores compared to stores in non-urban districts (n=14). Indeed, nearly two-thirds (67%) of urban stores were non-chain convenience stores, compared to 22.6% 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 types in urban vs. non-urban districts, 2019

Store type	Urban district n (%)	Non-urban district n (%)
Convenience, non-chain	63 (67.1)	14 (22.6)
Convenience, chain	5 (5.3)	18 (29.0)
Dollar store	4 (4.3)	2 (3.2)
Drug store	5 (5.3)	7 (11.3)
Gas station, kiosk only	2 (2.1)	9 (14.5)

Liquor store	11 (11.7)	10 (16.1)
Dollar store	4 (4.3)	2 (3.2)
Total	**94 (100%)**	**62 (100%)**

Cigarettes

Table 2 describes the presence of exterior and interior ads by store type, as well as the availability of cigarettes. Overall, only two stores (1.3%) did not sell cigarettes. Almost half of all stores had at least one exterior cigarette advertisement (47.4%), but exterior advertising was more prevalent among chain convenience stores (82.6%). Notably, no drug stores in the sample had exterior cigarette advertisements. Despite having no exterior ads, 75% of drug stores had interior cigarette advertising, though interior advertising was more common in chain convenience stores (95.7%).

Only 17.9% of stores had 5 or more exterior ads for cigarettes (Table 3). In general, chain convenience stores had the highest volume of exterior cigarette advertising, with 47.8% displaying five or more 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 (Table 4). Approximately 40% of all stores had five or more interior cigarette ads. Most of the chain convenience stores (86.9%) had five or more interior ads.

Table 2. Presence of cigarette ads and availability by store type, 2019

Store type	Availability %	Exterior ads %	Exterior menthol ads %	Interior ads %	Interior menthol ads %
Convenience, non-chain (n=77)	97.4	50.6	42.8	66.3	49.4
Convenience, chain (n=23)	100	82.6	73.9	95.7	95.7
Dollar store (n=6)	100	50.0	33.3	66.7	33.3
Drug store (n=12)	100	0.0	0.0	75.0	75.0
Gas station, kiosk only (n=11)	100	45.5	36.4	9.1	0.0
Liquor store (n=21)	100	33.3	23.8	80.9	66.7
Other (n=6)	100	16.7	16.7	33.3	16.7
Overall (n=156)	**98.7**	**47.4**	**39.7**	**67.9**	**55.1**

Table 3. Number of exterior cigarette ads by store type, 2019

Store type	0 ads %	1 to 4 ads %	5 or more ads %
Convenience, non-chain (n=77)	49.4	36.4	14.3
Convenience, chain (n=23)	17.4	34.8	47.8
Dollar store (n=6)	50.0	16.7	33.3
Drug store (n=12)	100.0	0.0	0.0
Gas station, kiosk only (n=11)	54.5	27.3	18.2
Liquor store (n=21)	66.7	28.6	4.8
Other (n=6)	83.3	0.0	16.7
Overall (n=156)	**52.5**	**29.5**	**17.9**

Table 4. Number of interior cigarette ads by store type, 2019

Store type	0 ads %	1 to 4 ads %	5 or more ads %
Convenience, non-chain (n=77)	33.7	35.1	31.2
Convenience, chain (n=23)	4.4	8.7	86.9
Dollar store (n=6)	33.3	33.3	33.3
Drug store (n=12)	25.0	8.3	66.7
Gas station, kiosk only (n=11)	90.9	9.1	0.0
Liquor store (n=21)	19.1	42.9	38.1
Other (n=6)	66.7	16.7	16.7
Overall (n=156)	**32.1**	**27.6**	**40.4**

Figures 7 and 8 highlight differences in the prevalence and volume of cigarette advertising in urban vs. non-urban stores. Non-urban stores were generally more likely to have a greater number of interior cigarette ads, while urban stores had slightly more exterior ads. More than two thirds of both urban and non-urban stores had at least one interior cigarette ad. Further, over a quarter of non-urban stores had five or more exterior cigarette ads, while only 12.7% of urban stores displayed five or more exterior cigarette ads.

Figure 7. Presence of cigarette advertising in urban (n=94) and non-urban (n=62) stores, %, 2019

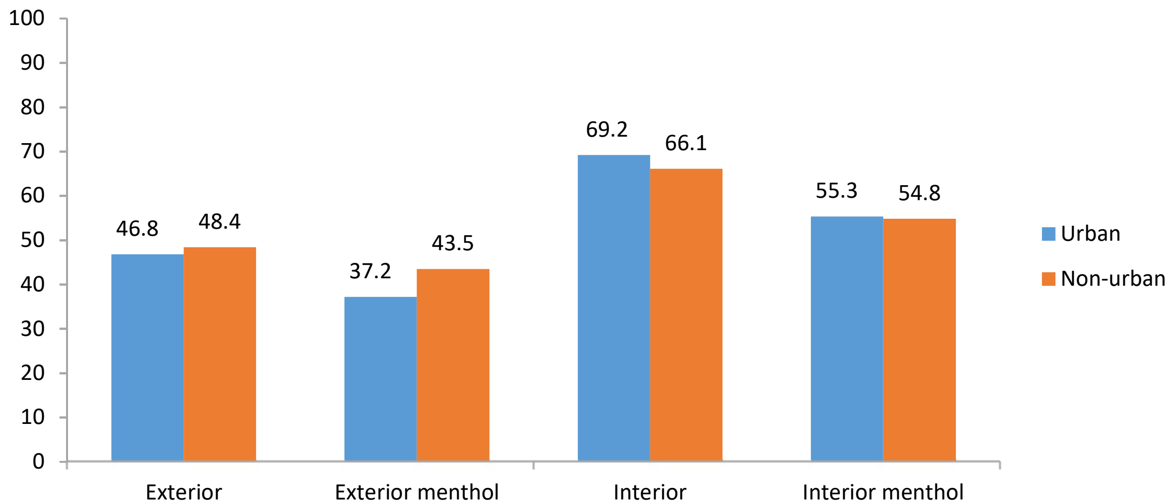
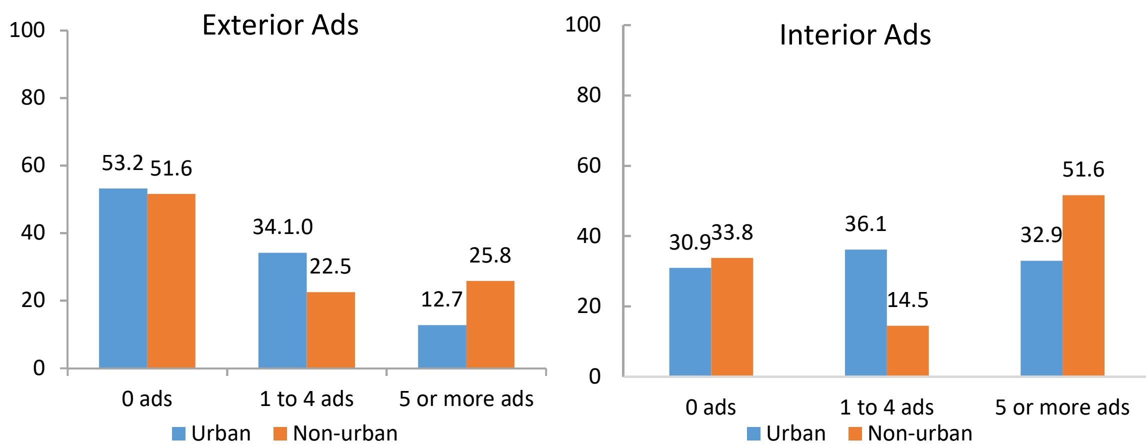


Figure 8. Number of exterior and interior cigarette ads in urban (n=94) and non-urban (n=62) stores, 2019



Cigars/cigarillos

Cigar products, including large cigars and cigarillos, were the second most commonly sold tobacco product in stores following cigarettes. As shown in Table 5, 89.1% of all stores sold cigars and nearly all of those stores offered flavored varieties (87.8%). Cigar availability was highest in convenience stores (both chain and non-chain).

Table 5. Cigar/cigarillo availability by store type, 2019

Store type	Cigar availability %	Flavored cigar availability %
Convenience, non-chain (n=77)	90.9	89.6
Convenience, chain (n=23)	100.0	100.0
Dollar store (n=6)	83.3	83.3
Drug store (n=12)	83.3	83.3
Gas station, kiosk only (n=11)	90.9	81.8
Liquor store (n=21)	85.7	85.7
Other (n=6)	50.0	50.0
Overall (n=156)	**89.1**	**87.8**

Next to cigarettes, cigars were the most commonly advertised tobacco product in stores. Cigar advertisements, however, were substantially less common than cigarette ads. Only 20.5% of stores had at least one exterior cigar ad and 31.4% displayed at least one interior cigar ad (Table 6). Prevalence of cigar advertising was generally highest in chain convenience stores, especially the interior. Interestingly, although 83.3% of drug stores carried cigars, none advertised these products.

Table 6. Presence of cigar/cigarillo ads by store type, 2019

Store type	Exterior ads %	Exterior flavored ads %	Interior ads %	Interior flavored ads %
Convenience, non-chain (n=77)	27.27	20.8	28.6	25.9
Convenience, chain (n=23)	34.78	21.7	82.6	65.2
Dollar store (n=6)	0.0	0.0	50.0	33.3
Drug store (n=12)	0.0	0.0	0.0	0.0
Gas station, kiosk only (n=11)	18.2	9.1	0.0	0.0
Liquor store (n=21)	0.0	0.0	19.1	9.5
Other (n=6)	16.7	0.0	16.7	16.7
Overall (n=156)	**20.5**	**14.1**	**31.4**	**25.6**

A comparison of urban and non-urban stores revealed that exterior and interior cigar advertisements were more prevalent in non-urban stores (Figure 9). Non-urban stores were almost twice as likely to have exterior cigar advertising compared to urban stores (15.9% vs. 27.4%). Exterior ads for *flavored* cigars/cigarillos were more common in non-urban stores. Similarly, the availability of flavored cigars was slightly higher in non-urban stores (Figure 10).

Figure 9. Presence of cigar ads in urban (n=94) and non-urban (n=62) stores, 2019

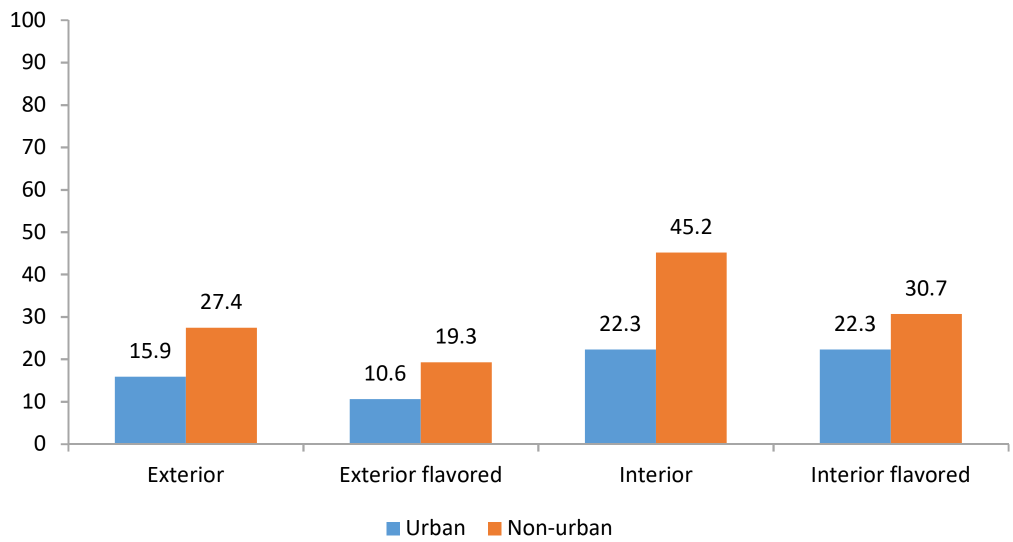
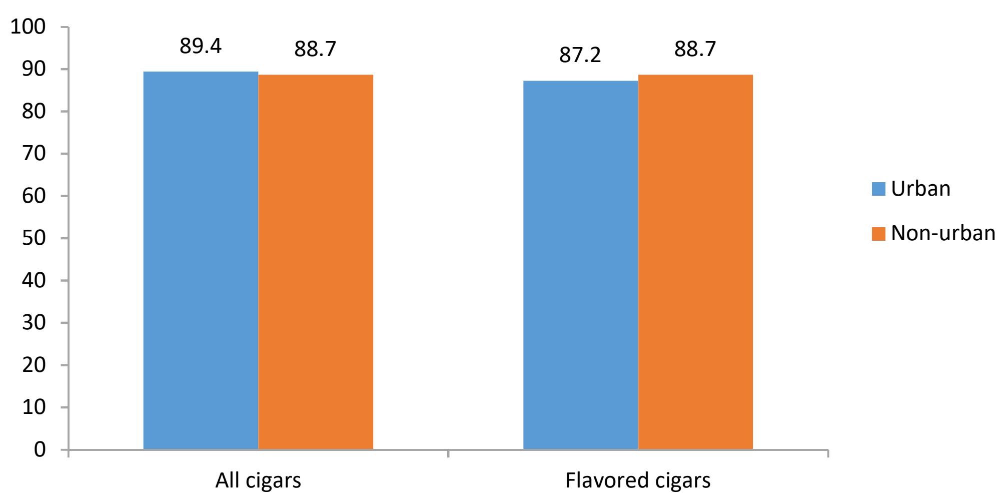


Figure 10. Cigar and flavored cigar availability in urban (n=94) and non-urban (n=62) stores, 2019



Smokeless Tobacco

Smokeless tobacco (including snus and snuff) was sold in 19.9% of all stores in the sample but was most commonly available in chain convenience stores (82.6%). Smokeless tobacco was not available in gas stations, liquor stores, and other stores (Table 7).

Table 7. Smokeless Tobacco availability by store type, 2019

Store type	Smokeless tobacco availability %
Convenience, non-chain (n=77)	11.7
Convenience, chain (n=23)	82.6
Dollar store (n=6)	33.3
Drug store (n=12)	8.3
Gas station, kiosk only (n=11)	0.0
Liquor store (n=21)	0.0
Other (n=6)	0.0
Overall (n=156)	**19.9**

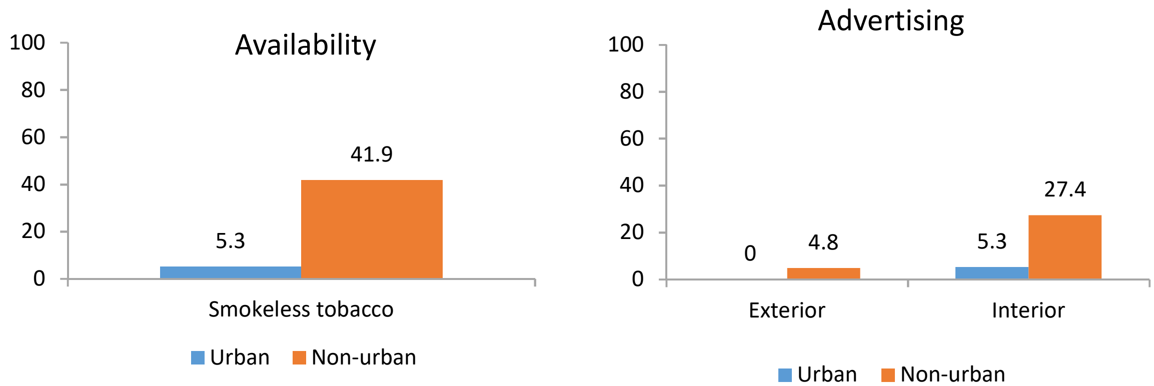
Table 8 presents the prevalence of smokeless tobacco advertising by store type. Overall, exterior ads for smokeless tobacco were uncommon (1.9% of stores), but the prevalence was relatively high among chain convenience stores (4.4%) and convenience non chain (2.6%). Interior ads were more common (14.1% of all stores) and most prevalent in chain convenience stores (65.2%), followed by dollar stores (33.3%).

Table 8. Smokeless tobacco advertising by store type, 2019

Store type	Exterior ads %	Interior ads %
Convenience, non-chain (n=77)	2.6	6.5
Convenience, chain (n=23)	4.4	65.2
Dollar store (n=6)	0.0	33.3
Drug store (n=12)	0.0	0.0
Gas station, kiosk only (n=11)	0.0	0.0
Liquor store (n=21)	0.0	0.0
Other (n=6)	0.0	0.0
Overall (n=156)	**1.9**	**14.1**

Both exterior and interior smokeless tobacco ads were extremely uncommon in urban stores. For example, there was no urban store in the sample that had any exterior ads for smokeless tobacco. Likewise, smokeless tobacco was substantially more available in non-urban compared to urban stores. Almost half (41.9%) of non-urban stores sold smokeless tobacco, compared to less than 5.3% of urban stores (Figure 11).

Figure 11. Advertising and availability of smokeless tobacco in urban (n=94) and non-urban (n=62)) stores, 2019



E-cigarettes

E-cigarettes, including JUUL, were available in almost half of all stores audited (43.6%) (Table 9). Availability of e-cigarettes was most common in chain convenience stores (100%) and drug stores (75%). Less than a third of non-chain convenience stores sold e-cigarettes (27.3%).

Table 9. Availability of e-cigarettes and flavored e-cigarettes, 2019

Store type	E-cig availability %	Flavored e-cig availability %
Convenience, non-chain (n=77)	27.3	25.9
Convenience, chain (n=23)	100	100
Dollar store (n=6)	50.0	50.0
Drug store (n=12)	75.0	75.0
Gas station, kiosk only (n=11)	27.3	27.3
Liquor store (n=21)	38.1	38.1
Other (n=6)	16.7	0.0
Overall (n=156)	**43.6**	**42.3**

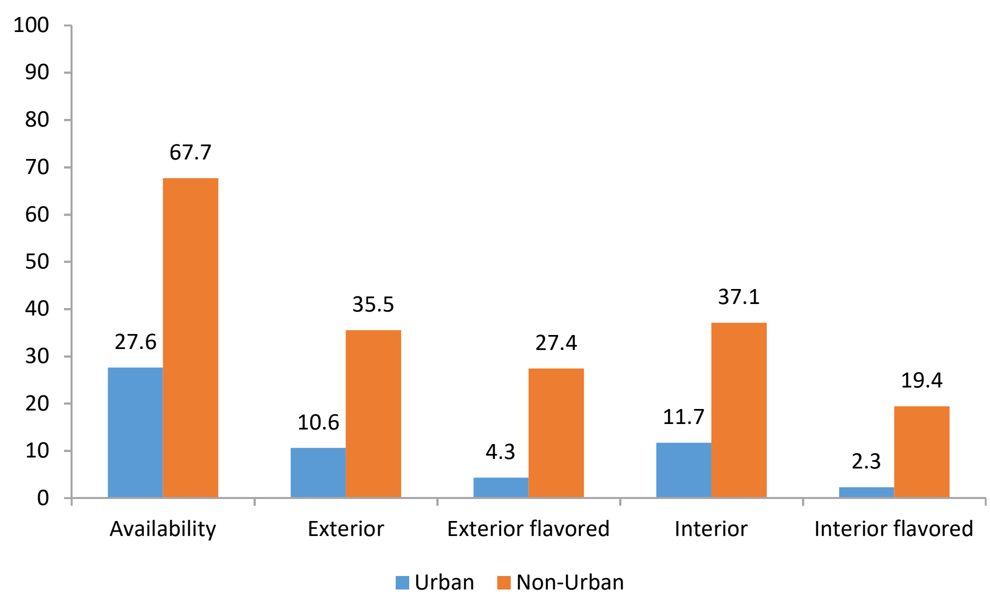
Slightly over 20% of all stores had exterior or interior e-cigarette advertisements (Table 10). Interestingly, most drug stores carried e-cigarette products (75%), but none in the sample displayed any e-cigarette advertisements. Mirroring trends in availability, chain convenience stores frequently had exterior (60.9%) and interior (69.6%) e-cigarette advertisements. Most stores with e-cigarette advertising only had one or two ads (data not in table).

Table 10. Presence of e-cigarette advertising by store type, 2019

Store type	Exterior ads %	Exterior flavored ads %	Interior ads %	Interior flavored ads %
Convenience, non-chain (n=77)	15.8	9.1	15.5	6.5
Convenience, chain (n=23)	60.9	43.5	69.6	39.1
Dollar store (n=6)	16.7	16.7	16.7	0.0
Drug store (n=12)	0.0	8.3	8.3	0.0
Gas station, kiosk only (n=11)	27.3	18.2	0.0	0.0
Liquor store (n=21)	4.8	0.0	19.1	0.0
Other (n=6)	16.7	0.0	0.0	16.7
Overall (n=156)	**20.5**	**13.5**	**21.8**	**8.9**

E-cigarette advertising was more prevalent in non-urban stores (Figure 12). The prevalence of exterior e-cigarette advertising in non-urban stores (35.5%) was more than three times that of urban stores (10.6%). Interior e-cigarette advertising in non-urban stores (37.1%) was over two times more prevalent than in urban stores (11.7%). Additionally, the availability of e-cigarette products was substantially greater in non-urban stores. Less than a third of urban stores (27.6%) sold any type of e-cigarette, compared to 67.7% of non-urban stores.

Figure 12. E-cigarette availability and presence of e-cigarette ads urban (n=94) and non-urban (n=62) stores, 2019



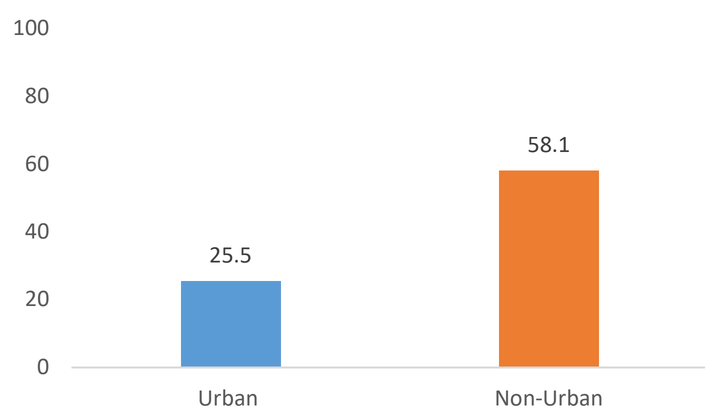
JUUL Products

Given the popularity of JUUL products, we examined availability and placement of JUUL in stores, separately from other e-cigarette products. Overall, JUUL products were available in 38.5% of audited stores. Of these, chain convenience stores had the highest availability of JUUL products (91.3%). JUUL products were not found in dollar stores or stores categorized as other (see Table 11). The presence of JUUL advertisements was quite low –only 8.3% of stores had exterior JUUL advertisements and 6.4% had interior JUUL advertisements (data not reported in tables). JUUL products were two times more available in non-urban stores (58.1%) than in urban stores (25.5%).

Table 11. JUUL availability by store type, 2019

Store type	Availability %
Convenience, non-chain (n=77)	27.3
Convenience, chain (n=23)	91.3
Dollar store (n=6)	0.0
Drug store (n=12)	66.7
Gas station, kiosk only (n=11)	27.3
Liquor store (n=21)	33.3
Other (n=6)	0.0
Overall (n=156)	**38.5**

Figure 13. JUUL availability in urban (n=94) and non-urban (n=62) stores, 2019



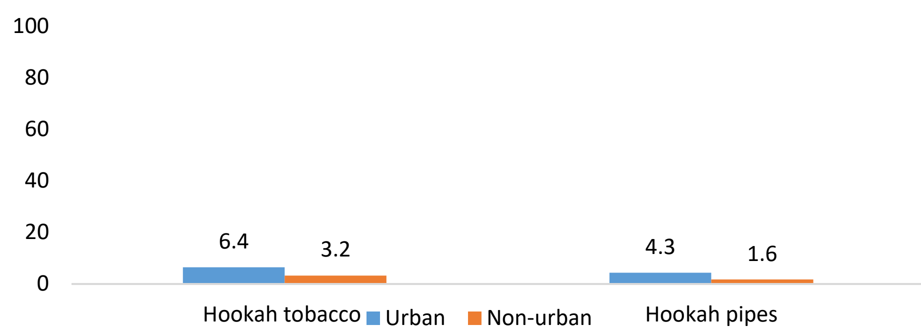
Hookah

Hookah tobacco was available in 5.1% of all stores, while hookah pipes were available in 3.2% of all stores (see Table 12). Non-chain convenience stores had the highest percentage of hookah tobacco availability (10.4%). Figure 13 illustrates the differences in hookah tobacco and hookah pipe availability in urban and non-urban stores. Hookah tobacco and pipe was more likely found in urban stores. Although some stores that sold hookah tobacco and pipes displayed signage that they carried these products, POS advertising from hookah manufacturers was non-existent.

Table 12. Hookah tobacco and hookah pipe availability by store type, 2019

Store type	Hookah tobacco availability %	Hookah pipe availability %
Convenience, non-chain (n=77)	10.4	6.4
Convenience, chain (n=23)	0.0	0.0
Dollar store (n=6)	0.0	0.0
Drug store (n=12)	0.0	0.0
Gas station, kiosk only (n=11)	0.0	0.0
Liquor store (n=21)	0.0	0.0
Other (n=6)	0.0	0.0
Overall (n=156)	**5.1**	**3.2**

Figure 14. Hookah tobacco and hookah pipe availability in urban (n=94) and non-urban (n=62) stores, 2019



Compliance with New Jersey Tobacco Age of Sale Signs

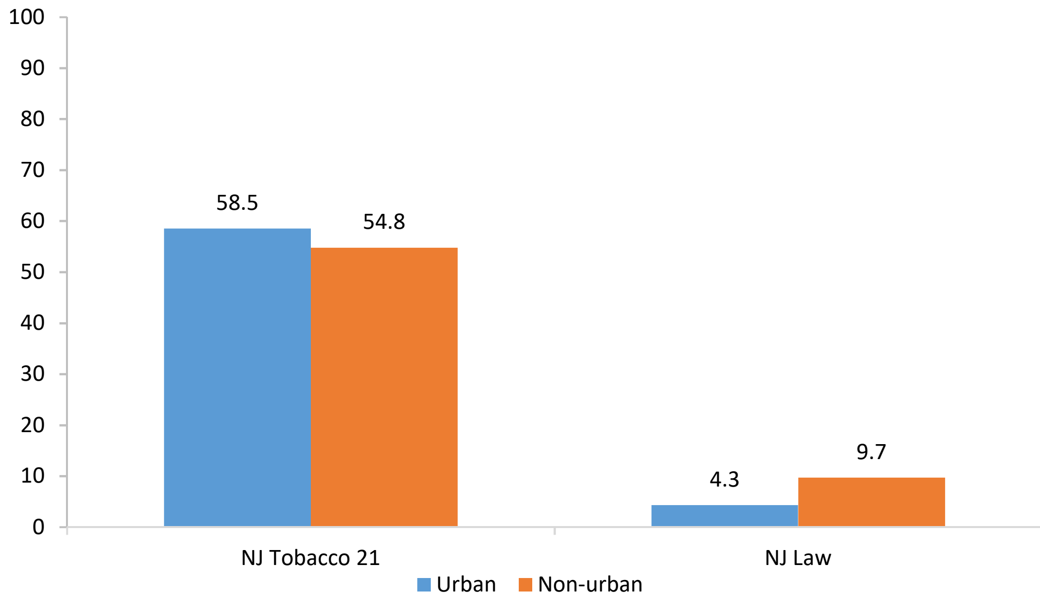
The presence of mandatory tobacco age of sale signs were found in less than 10% of all stores. Dollar stores (16.7%) and liquor stores (16.7%) had the highest percentage of compliance with mandatory signage. Non-mandatory age of sale signs provided by the New Jersey Department of Health were observed in nearly 70% of all stores. Dollar stores (100%) and liquor stores (80.9%) had the highest percentage of non-mandatory signage availability (see Table 14 below).

Table 14. New Jersey Non-mandatory and Mandatory Age of Sale Signage observed by store type, 2019

Store type	Non-mandatory (NJ DOH) signage observed %	Mandatory NJ tobacco retailer signage observed %
Convenience, non-chain (n=77)	55.8	3.9
Convenience, chain (n=23)	43.5	4.4
Dollar store (n=6)	100	16.7
Drug store (n=12)	16.7	16.7
Gas station, kiosk only (n=11)	72.7	9.1
Liquor store (n=21)	80.9	9.5
Other (n=6)	50.0	0
Overall (n=156)	**69.8**	**6.4**

There were minimal differences in non-mandatory New Jersey age of sale signage between urban and non-urban stores. However, mandatory age of sale signage was greater in non-urban stores (9.7%) versus urban stores (4.3%) (see Figure 15 below).

Figure 15. New Jersey Non-mandatory and Mandatory Age of Sale Signage observed in urban (n=94) and non-urban (n=62) stores, 2019



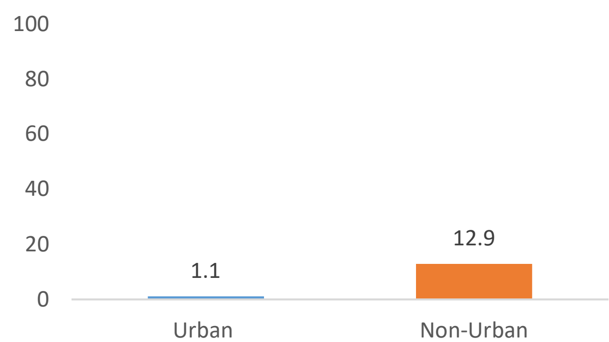
Emerging Product Watch List: Nicotine Free Tobacco Pouches

In 2019, we documented a new product subcategory: tobacco free nicotine pouches, which are touted as a safer alternative to smokeless tobacco pouches because they deliver nicotine through crystals rather than tobacco leaves. Popular brands include ON!, ZYN, and Velo and they are marketed in a variety of flavors including mint, wintergreen, coffee, and citrus. Overall, we found these products to be available in 5.7% of our sample (Table 15). Tobacco nicotine free pouches were more likely to be found in non-urban areas. For example, tobacco nicotine free pouches were available in 12.9% of stores (Figure 15). Overwhelmingly, tobacco nicotine free pouches were available in convenience chain stores (34.8%) (Table 15).

Table 15. Tobacco free nicotine pouches availability by store type, 2019

Store type	Availability %
Convenience, non-chain (n=77)	1.3
Convenience, chain (n=23)	34.8
Dollar store (n=6)	0.0
Drug store (n=12)	0.0
Gas station, kiosk only (n=11)	0.0
Liquor store (n=21)	0.0
Other (n=6)	0.0
Overall (n=156)	**5.7**

Figure 16. Tobacco free nicotine pouches availability in **urban (n=94) vs non-urban (n=62) stores, 2019**



Changes in Product Advertising, 2015-2019

Audits were successfully repeated in a cohort of retailers (n=156) between 2015 and 2019. Table 16 highlights changes in the prevalence of product advertising over these years. Exterior cigarette advertising has steadily decreased over the time period. There were notable increases in exterior and interior advertising of cigar/cigarillo products, including a 20% increase in the prevalence of interior ads for flavored cigars from 2018. Since data collection began in 2015, the prevalence of exterior cigar ads doubled while the prevalence of interior ads increased by 105%. The prevalence of smokeless advertising remained relatively unchanged during this time period. E-cigarettes were the only products for which advertising substantially decreased between 2015 and 2018. However, in 2019, the prevalence of e-cigarette ads slightly increased from the previous year yet remained below the 2015 numbers with the exception of exterior flavored advertisements.

Table 16. Changes in the prevalence of product advertising between 2015-2019 (n=156)

	2015 %	2016 %	2017 %	2018 %	2019 %	Percent Point Change 2015 vs. 2019
Cigarettes						
Exterior cigarette ads	57.7	53.8	50.6	46.8	47.4	-10.3
Exterior menthol cigarette ads	45.5	46.1	44.2	40.4	39.7	-5.8
Interior cigarette ads	66.1	64.1	70.5	69.9	67.9	+1.8
Interior Menthol cigarette ads	55.7	53.2	60.3	59.6	55.1	-0.6
Cigars						
Exterior cigar ads	10.3	15.3	19.8	21.8	20.5	+10.2
Exterior flavored cigar ads	8.3	9.6	9.6	16.1	14.1	+5.8
Interior cigar ads	15.3	23.1	24.3	26.3	31.4	+16.1
Interior flavored cigar ads	7.1	14.1	14.7	19.3	25.6	+18.5
Smokeless tobacco						
Exterior smokeless ads	3.8	3.8	3.2	3.2	1.9	-1.9
Interior smokeless ads	11.5	12.8	10.9	12.1	14.1	+2.6
E-cigarettes						
Exterior e-cig ads	32.7	20.5	13.5	15.4	21.1	-11.6
Exterior flavored e-cig ads	7.7	5.1	5.1	8.9	13.4	+5.7
Interior e-cig ads	35.3	26.9	16.7	21.2	20.5	-14.8
Interior flavored e-cig ads	12.8	10.3	8.9	10.9	8.9	-3.9

Changes in Product Availability, 2015-2019

Table 17 displays changes in product availability between 2015 and 2019. Cigarettes were almost universally available across years. Availability of cigars/cigarillos increased between 2015 and 2019. Mirroring trends in product advertising, e-cigarette availability decreased by 23% from 2015 to 2019, largely because of the decline between 2015 and 2016.

Table 17. Changes in product availability between 2015-2019 (n=156)

Product type	2015 %	2016 %	2017 %	2018 %	2019 %	Percentage point change 2015 vs. 2019
Cigarettes	99.4	99.4	98.7	98.7	98.7	-0.7
Cigars	85.3	90.4	91.1	89.7	89.1	+3.8
Flavored cigars	82.2	87.1	87.1	87.1	87.8	+5.6
Smokeless Tobacco	20.5	18.6	23.7	23.1	19.9	-0.6
E-cigarettes	56.4	46.8	42.9	42.9	43.6	-12.8
Flavored e-cigarettes	44.2	35.2	37.8	41.7	42.3	-1.9

Comparison of Cohort and 2019 Sample

We compared findings from the cohort of retailers (2015-2019) to the new sample in 2019 on several key variables. Overall, we did not find key differences across main indicators of tobacco product availability and advertising with the notable exception of exterior ads for e-cigarettes. For example, 20.5% of stores in the cohort sample had exterior e-cigarette ads, while the new 2019 sample had 13.2%. Further 13.4% of stores had exterior flavored e-cigarette ads in the cohort sample compared to 6.6% in the new 2019 sample (Table 18). Similar patterns were observed for availability. In the cohort sample, e-cigarettes were available in 43.6% of stores, when compared to 35.2% of stores in the new sample (Table 19). Differences can be attributed to sampling. In the cohort sample, there were 94 stores successfully surveyed and categorized as urban.whereas in the 2019 sample, there were 153 stores categorized as urban? E-cigarette advertising and availability is more prevalent in non-urban locations.[14]

Table 18. Changes in the prevalence of product advertising between Cohort Sample (n=156) and 2019 Sample (n=213)

	Cohort Sample %	2019 Sample %
Cigarettes		
Exterior cigarette ads	47.4	37.6
Exterior menthol cigarette ads	39.7	33.3
Interior cigarette ads	67.9	53.1
Interior Menthol cigarette ads	55.1	44.1
Cigars		
Exterior cigar ads	20.5	24.8
Exterior flavored cigar ads	14.1	17.8
Interior cigar ads	31.4	30.5
Interior flavored cigar ads	25.6	25.8
Smokeless tobacco		
Exterior smokeless ads	1.9	1.4
Interior smokeless ads	14.1	9.4
E-cigarettes		
Exterior e-cig ads	20.5	13.2
Exterior flavored e-cig ads	13.4	6.6
Interior e-cig ads	21.8	15.9
Interior flavored e-cig ads	8.9	6.1

Table 19. Sample Comparisons for Product Availability

Product type	Cohort (n=156) %	2019 Sample (n=213) %
Cigarettes	98.7	95.7
Cigars	89.1	79.8
Flavored cigars	87.8	78.4
Smokeless tobacco	19.8	16.4
E-cigarettes	43.6	35.2
Flavored e-cigarettes	42.3	32.8

SUMMARY

Overall, cigarettes were by far the most available and advertised tobacco product across all stores in the selected sample. Furthermore, 40% of stores had a *high number* of interior cigarette ads (i.e., 5 or more). Cigars and cigarillos were also widely available but were more likely to be found in urban stores. Similarly, hookah tobacco and pipes were more available in urban stores than non-urban stores. Conversely, smokeless tobacco and e-cigarettes were harder to find in urban stores compared to non-urban stores.

The notable difference in cigarette promotion between urban and non-urban stores was the higher *number* of both exterior and interior ads in non-urban stores. Advertising *prevalence* for other tobacco products, such as cigars/cigarillos, smokeless tobacco, and e-cigarettes, was substantially greater in non-urban stores. This is likely a function of the types of stores that dominate urban versus non-urban school districts. For example, the stores around non-urban schools were more likely to be chain convenience stores which were found to have a high prevalence of non-cigarette tobacco product advertising. On the contrary, stores near urban schools were more likely to be independently owned ("mom and pop") stores or bodegas, which may not heavily advertise non-cigarette tobacco products.

Between 2015 and 2019, the promotion and availability of cigars and cigarillos increased among stores in the cohort sample, but the data suggest that retailers may be reducing their promotion of e-cigarettes. It will be important to monitor whether changes in the tobacco retail environment will mirror changes in youth tobacco use behaviors as reflected in the New Jersey Youth Tobacco Survey. In 2019, we continued to measure the availability of JUUL, a popular e-cigarette product. Overall, we found that JUUL availability increased from 22.7% in 2018 to 38.5% in 2019. Further, in our 2019 audit, we continued to measure compliance with New Jersey tobacco age of sale signage. We found that less than 10% featured mandatory age of sale signs and 70% of stores featured non-mandatory age of sale signs. Differences between the two may correspond with outreach methods and/or agency contacts.

Overall, this report provides important findings about the accessibility and promotion of various tobacco products near New Jersey high schools. During a time when cigarette smoking rates are declining among youth, and e-cigarette use is increasing it is critical to continue to monitor the marketing of other tobacco products in areas where youth spend time (e.g., near schools). The heavy promotion of cigars, cigarillos, and e-cigarettes is particularly concerning given that on average these products are cheaper to purchase than cigarettes. Unsurprisingly, these are three of the most common tobacco products among youth in New Jersey. We should continue to monitor how tobacco product promotion changes over time and collect data from other retail locations where youth spend time, including stores near parks, shopping malls and residential neighborhoods.

REFERENCES

1. Cross GS, Proctor RN. *Packaged Pleasures: How Technology and Marketing Revolutionized Desire*. University of Chicago Press; 2014 Sep 30.

2. Hobbs W O. Opening Remarks Wm.D. Hobbs. January 1975. https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/#id=xtcl0096.

3. Federal Trade Commission. Federal trade commission smokeless tobacco report for 2017. https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-cigarette-report-2017-federal-trade-commission-smokeless-tobacco-report/ftc_smokeless_tobacco_report_2017.pdf Updated 2019

4. Federal Trade Commission. Federal trade commission cigarette report for 2017. https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-cigarette-report-2017-federal-trade-commission-smokeless-tobacco-report/ftc_cigarette_report_2017.pdf. Updated 2019.

5. Robertson L, McGee R, Marsh L, Hoek J. A systematic review on the impact of point-of-sale tobacco promotion on smoking. *Nicotine & Tobacco Research*. 2015;17(1):2-17.

6. Paynter J, Edwards R. The impact of tobacco promotion at the point of sale: A systematic review. *Nicotine & Tobacco Research*. 2009;11(1):25-35.

7. Hrywna M, Bover Manderski M, and Talbot E. The 2018 New Jersey Youth Tobacco Survey: A Statewide Report. New Brunswick, NJ: Rutgers Center for Tobacco Studies; September 2019.

8. Richardson A, Ganz O, Stalgaitis C, Abrams DB, Vallone DM. Noncombustible tobacco product advertising: How companies are selling the new face of tobacco. *Nicotine & Tobacco Research*. 2014;16(5):606-614.

9. Willett, J. G., Bennett, M., Hair, E. C., Xiao, H., Greenberg, M. S., Harvey, E., ... & Vallone, D. (2018). Recognition, use and perceptions of JUUL among youth and young adults. *Tobacco control*, tobaccocontrol-2018.

10. Securities WF. *Nielsen: Tobacco "All Channel" Data. Equity Research*. San Francisco, CA: Wells Fargo Securities, 2018.

11. Kaplam, S, Ritchel, M. Juul Closes Deal with Tobacco giant Altria. *New York Times*. https://www.nytimes.com/2018/12/20/health/juul-reaches-deal-with-tobacco-giant-altria.html

12. U.S. Department of Commerce. U.S. Census Bureau QuickFacts. https://www.census.gov/quickfacts/fact/table/US/PST045216.

13. State of New Jersey Department of Education. D.O.E. Data and Reports. http://www.state.nj.us/education/data/

14. Giovenco DP, Spillane TE, Merizier JM. Neighborhood differences in alternative tobacco product availability and advertising in New York City: implications for health disparities. *Nicotine and Tobacco Research*. 2018; 21(7):896-902.