Retail Store Assessments for Flavored Tobacco Products: A Pilot in Two Tobacco Nation Cities

Acknowledgments and Contributors:

Counter Tools
Mollie Mayfield, Charla Rios, Amanda Kong, Sharon Prochaska

Truth Initiative
Stacey Gagosian, Shyanika Rose

Case Western Reserve Univeristy Prevention Research Center for Healthy Neighborhoods
Erika Trapl, Elizabeth Frost

Dayton-Montgomery County Public Health
Bruce Barcelo, Jennifer Boyd

Background

Counter Tools and Truth Initiative partnered in 2018 to develop a set of retail tobacco store assessment questions specifically focused on menthol and other flavored tobacco products as an additional module to the Standardized Tobacco Assessment for Retail Settings (STARS) form. This set of questions was piloted in two cities within Tobacco Retailer Nation in order to field-test the questions and to facilitate the cities' consideration of flavor-based policies and other point-of-sale tobacco control policies.

Project Rationale: Why focus on flavored tobacco products?

Flavored tobacco products are widely available across the United States and present a number of concerns for public health. While the 2009 Family Smoking Prevention and Tobacco Control Act (FSPTCA) prohibited the sale of cigarettes with "characterizing flavors," it excluded menthol flavor along with tobacco flavor, and this restriction does not apply to any other tobacco products including cigars, cigarillos, smokeless tobacco, hookah, or e-cigarette products.

The ban on flavored cigarettes was associated with a 17% reduction in the probability of middle and high school youth becoming smokers and a 58% reduction in cigarettes smoked by current youth smokers, and a 6% reduction in the probability of youth using any tobacco product.[1] However, the ban was also associated with a 45% increase in youth use of menthol cigarettes, a 34% increase in use of cigars, and a 55% increase in use of pipes, indicating that youth may be substituting menthol cigarettes and other flavored tobacco products in place of flavored cigarettes and pointing towards the need for more comprehensive restrictions on the sale of all flavored tobacco products.[2]

Additionally, when flavored cigarettes were banned, flavored cigars and cigarillos with flavors including candy and other sweets, fruit, alcoholic beverages, herbs, and spices became increasingly popular among youth and adults, with sales increasing by 50% between 2008 and 2015.[3] In recent years tobacco companies have been selling and advertising tobacco products, particularly cigars and cigarillos, hookah, and e-cigarettes with more ambiguous names such as colors, jewels, or concepts (e.g. blue, green, Jazz, diamond, tropical twist, island madness). While these flavors are described by users as flavored[4] and have similar chemical compositions as more clearly flavored products (e.g. peach or grape)[5], this may be the tobacco industry's strategy to make restrictions on the sale of flavored tobacco products more difficult to enforce. This also follows the tobacco industry's pattern of behavior in response to other tobacco control regulations. When the FSPTCA prohibited the use of modified risk health descriptors such as "light," "low tar," or "mild" in cigarettes, Marlboro changed the name of their "Marlboro Light" cigarettes to "Marlboro Gold," "Marlboro Ultra Lights" to "Marlboro Silver," and "Marlboro Mild" to "Marlboro Blue."

Flavored tobacco products, including menthol cigarettes, contribute to youth tobacco use initiation. Over 80% of youth who have ever used tobacco started with a flavored product.[6] Not only do the flavored tobacco products and their colorful packaging attract youth, but youth also perceive these flavored products as less harmful.[7] These flavored cigars, cigarillos, blunts, e-cigarette products and hookah are widely available at retail stores, including at convenience stores where youth frequently shop,[8] and they can also be placed right on the counter in self-service displays and next to similar-looking candy or other youth-centric items. Cigarillos, little cigars, and blunts which are all commonly sold for less than $1, are just as harmful as cigarettes.[9]

These cheap prices increase the products' appeal to youth and young adults, who are more price-sensitive than older adults.[10] Lower prices encourage youth tobacco use initiation as well and, along with coupons and other price discounts, encourage youth to move from experimentation to regular smoking.[11] Tobacco companies spent over 85% of their total marketing expenditures for cigarettes and smokeless tobacco in 2017 on price discounts.[12] These price promotions and cheap prices can make flavored tobacco products even more appealing to youth and other price-sensitive groups. Raising the price of tobacco products is one of the most effective strategies for reducing initiation, decreasing consumption, and increasing cessation.[13]

Youth use of e-cigarettes has skyrocketed in recent years. E-cigarettes are now the most commonly used tobacco product among youth, with 20.8% of high school students and 4.9% of middle school students reporting current use in 2018.[14] E-cigarette products are often available in flavors that appeal to youth, and have some have been sold in packages designed to look like juice boxes, popular children's cereals, and candies.[15] In 2018, the e-cigarette company Juul captured over 75% of the e-cigarette market share in the United States with their high nicotine delivery "pod-mod" style devices, and many other tobacco companies introduced similar style e-cigarette products. Youth e-cigarette use grew by 78% across the United States from 2017-2018,[16] driven largely by use of Juul.

The exclusion of menthol cigarettes in the 2009 FSPTCA left on the marketplace a deadly product that is easier to start, harder to quit, and has been disproportionately targeted to the African-American community for decades.[17] [18] Marketing for menthol tobacco products is more prevalent in urban neighborhoods and neighborhoods with black residents.[19] A 2015 study in both rural and urban Ohio also found a higher prevalence of ads for cigarillos, cigars, and e-cigarettes in African American communities and found that urban, disadvantaged, African-American communities had advertisements for more types of tobacco products overall.[20] Studies have shown that menthol cigarettes specifically are priced lower and more frequently discounted in African-American neighborhoods.[21] As a result of this targeted marketing, menthol cigarettes are most popular among African-American smokers, 85% of whom prefer menthol cigarettes.[22] However, menthol marketing also targets other communities of color, youth, and women.[23] Since 2011, sales of menthol cigarettes have increased, and increasing numbers of Asian & Hispanic smokers are preferring menthol over non-menthol.[24] [25] Similarly, little cigars and cigarillos, which are often flavored, are often priced lower in communities with more African-American residents and more young adults.[26] The disparate presence and promotion of these products in already disadvantaged neighborhoods contributes to and exacerbates disparities in tobacco use behaviors and tobacco-related death and disease.

Development of a flavor and menthol tobacco retail store assessment module

The Standardized Tobacco Assessment for Retail Settings (STARS) form was designed for practitioners to inform state and local tobacco control policies pertaining to the point of sale. The STARS form and training materials resulted from a collaboration of SCTC researchers with stakeholders from five state health departments, the CDC, and the Tobacco Control Legal Consortium. The assessment items, which include tobacco product availability, price, promotion, and placement were selected exclusively for their policy relevance. Similarly, Counter Tools and Truth Initiative sought to design and test a set of questions specifically focused on menthol and other flavored tobacco products that had direct policy relevance.

Counter Tools provides a slightly modified version of the STARS form to partners who use their software tools to collect and manage store assessment data. Counter Tools' partners at the Minnesota Department of Health chose to add some additional questions around menthol and other flavored tobacco products to assess the availability of these products and provide evidence in support of flavored tobacco policy initiatives. Counter Tools and Truth Initiative expanded upon these questions with some additional assessment items related to emerging flavored tobacco products, such as those with ambiguous flavor names, "pod mod" style e-cigarettes like JUUL, and e-liquid sold in droppers. We also added questions relating to emerging trends and promotional strategies, such as the provision mobile coupons for tobacco products in order to capture new promotional strategies for flavored tobacco products.

As in the form that the team in Minnesota used, we chose to ask specifically about mint, menthol, and wintergreen to encompass a wider range of menthol-flavored tobacco products. We also chose to ask separately about mint-, menthol-, or wintergreen-flavored products and other-flavored products in order to assess any differential availability, advertising, or pricing of the products overall and between different neighborhoods.

Measures

Descriptive statistics for each of the assessment items were calculated, including frequency and percent for each response with categorical response options. The average and range were calculated for each question regarding price. For open-ended assessment items asking about brand names or ambiguous flavor names, the mode was calculated.

Composite variables were created to assess the prevalence of retailers selling of any flavored tobacco product, with exterior ads for any flavored tobacco products, as well as for retailers that offered price promotions on any flavored tobacco product, any flavored e-cigarette product, and any flavored hookah product (mint-, menthol-, wintergreen-, or other-flavored).

We also assessed whether exterior ads for any flavored tobacco product were more prevalent at stores located within 1000ft of school compared with stores located greater than 1000ft from schools. To calculate this we used latitude and longitude information from the Homeland Infrastructure Foundation-Level Data Open Data Set. We geocoded tobacco retailers in each city based on the addresses given to us by our partners in those respective cities. The shapefiles in use were reprojected to the Transverse Mercator Projected Coordinate System of either: WGS_1984_UTM_Zone_16S or NAD_1983_UTM_Zone_17N. In ArcMap, we used the tool "select by location" to select all of the assessed retailers in Dayton and Cleveland that were "within a distance of 1000 ft" of a school. This as performed separately for each city. Those retailers that were selected, were given a 1 to specify "yes" for being within 1000ft of a school, all others were given a 0 for not being within 1000ft of a school. The measure tool was used to confirm retailers from each city.

Variation by Demographics:

- **% below poverty:** calculated at the census tract level using data from the American Community Survey, we compared the cheapest pack of cigarettes available as well as the price of a pack of

Newport menthol cigarettes in the quintile with the highest percentage of persons below the federal poverty level to the quintile with the lowest percentage.

- **% African American:** calculated at the census tract level using data from the American Community Survey, we compared the cheapest pack of cigarettes available as well as the price of a pack of Newport menthol cigarettes and availability of menthol cigarettes overall in the the quintile with the highest percentage African-American residents to the quintile with the lowest percentage.
- **% ages 5-17:** calculated at the census tract level using data from the American Community Survey, we compared the we compared the cheapest pack of cigarettes available in the quintile with the highest percentage of residents ages 5-17 to the quintile with the lowest percentage.

We did not test for statistical significance in any of the comparisons.

Why Tobacco Nation?

Tobacco Nation is a geographic area identified by Truth Initiative as a cluster of states where the smoking prevalence exceeds the national average as well as the prevalence in many of the most tobacco-dependent countries in the world.[27] One factor that contributes to the disparate smoking rates in this region is the lack of tobacco control policies in comparison to the rest of the United States. We chose to test this form within Tobacco Nation so that localities there would have additional data and resources to work towards policy change.

Methods

We recruited two cities in Ohio to participate in the project: Dayton and Cleveland. While Ohio has a comprehensive smokefree air law, it has not included e-cigarettes in this policy to date. The state's cigarette tax is $1.60, the 23rd lowest in the nation.[28] Ohio's adult smoking rate is 20.1%,[29] higher than the national average of 14%.[30] Both Dayton and Cleveland have smoking rates above both the national and state average at 22.7%[31] and 35.2%,[32] respectively.

Dayton, OH has a population of 140,371. The city is located in Montgomery County, where 10% of youth ages 12-17 reported current use of any tobacco product, and 8% reported current use of cigarettes from 2010-2012.[33] Dayton is 52.6% Non-Hispanic White, 39.3% Black or African American, 3.9% Hispanic or Latino, 3.4% two or more races, 0.9% Asian, and 0.3% American Indian and Alaskan Native.[34] In Montgomery County, 22.7% of adults reported current smoking from 2011-2013; however, more Non-Hispanic Black residents reported current smoking (25.1%) than White residents (21.4%).[35]

Using a list of 213 tobacco retailers provided by Public Health – Dayton & Montgomery County, Counter Tools selected a random sample of 167 retailers to be representative of all tobacco retailers in Dayton within a 95% confidence internal, including 20% oversampling to account for any retailers that were closed upon visit or that were otherwise unable to be assessed. Data collectors visited 95 retailers and were able to complete store assessments at 87 retailers, 86 of which sold tobacco. This number of retailers visited represents all tobacco retailers in the City of Dayton within a 90% confidence interval.

Cleveland, OH has a population of 388,072 and is located in Cuyahoga County. Cleveland enacted a policy raising the minimum legal sales age for tobacco products to 21 in April 2016. At the time the law was passed, advocates also sought to restrict the sale of flavored tobacco products within the city, except menthol cigarettes, to smoke shops that primarily sell tobacco, but it was not brought for a vote. Of concern among tobacco control leaders in the city, 13.1% of high school students in Cuyahoga County reported current cigar use (including cigarillos and little cigars) in 2017, compared to 6.2% that reported current cigarette use.[36] Cleveland also has a high adult smoking rate, with 35.2% of adults in Cleveland reporting current smoking in 2015, with 37.3% of Non-Hispanic White residents reporting current smoking and 36.1% of Non-Hispanic Black residents.[37] Cleveland is 50.4% Black or African American, 33.8% Non-Hispanic White, 11.2% Hispanic or Latino, 4% two or more races, 2.1% Asian, and 0.5% American Indian and Alaska Native.[38]

Using a list of 692 tobacco retailers in Cleveland, OH provided by Case Western Reserve University, Counter Tools selected a random sample of 102 retailers to be representative of all tobacco retailers in Cleveland within a 90% confidence internal, including 20% oversampling to account for any retailers that were closed upon visit or that were otherwise unable to be assessed. Data collectors visited all 102 retailers and were able to complete store assessments at 84 retailers, 74 of which sold tobacco.

Data analysis was completed by Counter Tools. Available store data rather than only complete store data was utilized in analysis; therefore, the total number of assessments summarized for each assessment item may vary depending on the amount of data that was available (or missing) for the particular assessment item.

Prior to conducting data analysis on tobacco store assessments, Counter Tools removed ineligible assessments that indicated the store could not be surveyed, indicated no tobacco products were sold and where retailer addresses could not be geocoded using ArcMap and/or Google. Because some data collectors used paper version of the store assessment form, which did not automatically enforce skip logic, we manually enforced the skip logic through data cleaning. There were two types of skip logic enforcement. For questions in some parent-child question relationships, if answers to all of a parent’s child questions were “no” or missing, then the parent must be "no" or missing, and if any of the child question answers were "yes," then the answer to the parent question must also be "yes." (E.g. if the answer to any of the questions regarding whether a specific tobacco product is sold here is “yes,” then the answer to “Is any tobacco sold here?” must be yes.) For other parent-child question relationships, if any of the child questions answers were “yes,” then the parent must also be “yes;” however, a child question could have a “no” or missing response while the parent response is “yes.” (E.g. There could be smokeless tobacco ads on the store exterior, but no flavored smokeless tobacco ads). The data was cleaned to ensure accordance with this skip logic.

The two participating cities received training and technical assistance from Counter Tools and Truth Initiative. While the two cities had some prior experience conducting store assessments, Counter Tools conducted a web-based training for the coordinators of the project in each city as well as some volunteers involved in data collection. The training covered why the retail environment matters for public health and tobacco control, the store assessment process, store assessment etiquette, and how to correctly answer each of the questions included on the form. The training also included a tutorial on how to use Counter Tools’ Store Audit Center. This mobile data collection platform allows users to assign data collectors to stores to assess, allowed those data collectors to complete the assessments on a mobile device, and allowed users to monitor and manage the data. Counter Tools also provided each city with a toolkit to use in training additional volunteers, including a training presentation, as well as a sample script and letter for data collectors' use when introducing themselves to retail clerks.

After data collection was complete, both cities received reports that packaged their data to help drive policy change and/or evaluate changes in the retail environment due to federal-level changes.

Results

Place

Tobacco Retailer Types Surveyed		
	Dayton (n=83)	**Cleveland (n=74)**
Convenience store	*30.1%*	*62.2%*
Mass merchandiser	*25.3%*	*2.7%*
Grocery store	*10.8%*	*5.4%*
Tobacco shop	*6.0%*	*1.4%*
Beer, wine, or liquor store	*3.6%*	*5.4%*
Drug store or pharmacy	*2.4%*	*2.7%*
Vape Shop	*0%*	*2.7%*
Other store type not listed	*21.7%*	*6.76%*

Tobacco Retailer Characteristics		
	Dayton	**Cleveland**
Accepts SNAP	22 of 59 (37.3%)	30 of 56 (53.6%)
Accepts WIC	12 of 61 (19.7%)	23 of 62 (37.1%)
Sells Alcohol	64 of 83 (77.1%)	60 of 74 (81.1%)
Pharmacy Counter Present	12 of 84 (14.3%)	13 of 72 (18.1%)

Convenience stores, which are frequented by youth,[39] were the most common type of tobacco retailer in both cities. Flavored tobacco products were available for sale at 85 of 85 (100%) retailers surveyed in Dayton, including convenience stores. In Cleveland, flavored tobacco products were available at 46 of 46 (100%) convenience stores and 72 of 74 (97.3%) retailers surveyed.

Products

Product Availability

Table interpretation: Menthol cigarettes were available in nearly all stores in both cities. While more stores in Dayton sold cigarillos, little cigars, or blunts, stores in both cities sold flavored versions at similar rates. Smokeless tobacco and e-cigarettes, including flavored products, were more widely available in Dayton. Hookah was available at around 10% of stores surveyed in each city, though of stores that sold hookah, most sold flavored versions. The percentages reported in this table for each assessment item only include stores for which data was available (excludes missing data).

	Dayton			**Cleveland**		
Product Sold	**Any** n of N (%)	**Menthol-Flavored** n of N (%)	**Other-Flavored** n of N (%)	**Any** n of N (%)	**Menthol-Flavored** n of N (%)	**Other-Flavored** n of N (%)
Cigarettes	82 of 85 (96.5%)	79 of 81 (97.5%)	N/A	71 of 74 (96%)	69 of 71 (97.2%)	N/A
Cigarillos, little cigars, or blunts	79 of 84 (94.1%)	63 of 72 (87.5%)	67 of 74 (90.5%)	63 of 74 (85.1%)	43 of 52 (82.7%)	56 of 62 (90.3%)

Traditional cigars	21 of 81 (25.9%)	5 of 15 (33.3%)	14 of 18 (77.8%)	23 of 73 (31.5%)	14 of 22 (63.6%)	14 of 23 (60.9%)
Chew, snuff, dip, or snus	55 of 80 (68.8%)	52 of 53 (98.1%)	46 of 52 (88.5%)	19 of 74 (25.7%)	16 of 19 (84.2%)	12 of 19 (63.2%)
E-cigarette products	36 of 79 (45.6%)	32 of 34 (94.1%)	26 of 34 (76.5%)	18 of 74 (24.3%)	13 of 18 (72.2%)	11 of 18 (61.1%)
Hookah	8 of 78 (10.3%)	8 of 9 (88.9%)	8 of 8 (100%)	7 of 74 (9.5%)	4 of 7 (57.1%)	6 of 7 (85.7%)

Availability of Specific Flavored Tobacco Products

- **Ambiguous flavor names**:
  - In Dayton, 52 of 71 (73.2%) retailers that sold cigarillos, little cigars, or blunts sold them with ambiguously named flavors. The most common ambiguous flavor names were Black & Mild “Jazz” or “Casino.” In Cleveland, 38 of 45 (84.4%) retailers that sold cigarillos, little cigars, or blunts sold them with ambiguously named flavors, and the most common ambiguous flavor names were Swisher Sweets “Coco Blue” or “Diamond” and Game “Blue.”
  - Additionally, 6 of 8 (75%) retailers in Dayton and 4 of 7 (57.1%) retailers in Cleveland that sold hookah also sold hookah with ambiguously named flavored such as Starbuzz “Blue Mist.”
- **Cigarettes with menthol capsules in the filter:** 46 of 68 (67.7%) retailers that sold cigarettes in Dayton also sold cigarettes with menthol capsules in the filter (e.g. Camel Crush, Marlboro NXT) compared to 31 of 67 (46.3%) retailers in Cleveland.
- **E-liquid in droppers:** In Dayton, 17 of 35 (48.6%) retailers that sold e-cigarette products also sold e-liquids in droppers compared to 6 of 18 (33.3%) retailers in Cleveland.
- **“Pod mod” e-cigarettes (e.g. Juul):**
  - In Dayton, 21 of 35 (60%) retailers that sold e-cigarette products sold pod-mod e-cigarette products such as Juul, compared to 10 of 18 (55.6%) in Cleveland.
- **Availability of menthol cigarettes in predominately African-American neighborhoods:**
  - In Dayton, menthol cigarettes were sold in 19 of 20 (95%) of retailers in census tracts with the lowest proportion of non-Hispanic Black residents vs. 22 of 22 (100%) of retailers in census tracts with the highest proportion of non-Hispanic Black residents
  - In Cleveland, Menthol cigarettes were sold in 18 of 19 (94.7%) retailers in census tracts with the lowest proportion of non-Hispanic Black residents and 11 of 11 (100%) retailers in census tracts with the highest proportion of non-Hispanic Black residents and
- **Availability of menthol cigarettes in low-income neighborhoods:**
  - In Dayton, menthol cigarettes were sold in 7 of 8 (87.5%) retailers in census tracts with the lowest proportion of households below the poverty level compared to 15 of 15 (100%) retailers census tracts with the highest proportion of households below the poverty level
  - In Cleveland, menthol cigarettes were sold in 10 of 10 (100%) retailers in census tracts with the highest proportion of households below the poverty level as well 12 of 12 (100%) retailers in census tracts with the lowest proportion of households below the poverty level.

Prices

Price Promotions

Table interpretation: Across products, a greater proportion of stores in Dayton offered price promotions than in Cleveland.The percentages reported for each assessment item only include stores for which data was available (excludes missing data).

	Dayton				Cleveland			
Product	**Any** n of N (%)	**Menthol-Flavored** n of N (%)	**Other-Flavored** n of N (%)	**Any-Flavored** n of N (%)	**Any** n of N (%)	**Menthol-Flavored** n of N (%)	**Other-Flavored** n of N (%)	**Any-Flavored** n of N (%)
Cigarettes	50 of 83 (60.2%)	48 of 49 (98%)	N/A	N/A	34 of 71 (47.9%)	30 of 34 (88.2%)	N/A	N/A
Cigarillos, little cigars, or blunts	48 of 76 (63.2%)	33 of 43 (76.7%)	36 of 44 (81.8%)	41 of 50 (82%)	28 of 63 (44.4%)	15 of 25 (60%)	22 of 28 (78.6%)	22 of 28 (78.7%)
Chew, snuff, dip, or snus	24 of 54 (44.4%)	24 of 24 (100%)	21 of 23 (91.3%)	25 of 29 (86.2%)	4 of 19 (21.1%)	4 of 4 (100%)	2 of 4 (50%)	6 of 8 (75%)
E-cigarette products	19 of 37 (51.4%)	16 of 19 (84.2%)	15 of 19 (79%)	17 of 19 (89.5%)	4 of 18 (22.2%)	2 of 4 (50%)	2 of 4 (50%)	2 of 4 (50%)
Hookah	5 of 9 (55.6%)	4 of 5 (80%)	4 of 5 (80%)	16 of 21 (76.2%)	1 of 7 (14.3%)	0 of 1 (0%)	0 of 1 (0%)	2 of 5 (40%)

Mobile tobacco coupons are emerging trend wherein coupons are sent to customers phone or downloadable from tobacco company website and redeemable at brick-and-mortar retailers. In Dayton, 22 of 80 (27.5%) retailer indicated that they accepted mobile tobacco coupons compared to only 6 of 74 (8.1%) of retailers in Cleveland.

Average Product Prices

	Dayton	**Cleveland**
Newport Menthol cigarette pack	$6.91 Range: $5.26-$7.85	$7.49 Range: 6.36-$8.65
Cheapest cigarette pack	$4.95 Range: $3.43 - $8.60	$5.89 Range: $1.99 - $8.65
Blu single disposable menthol e-cigarette	$7.97 Range: $1.00 - $15.00	$11.66 Range: $7.99 - $16.99

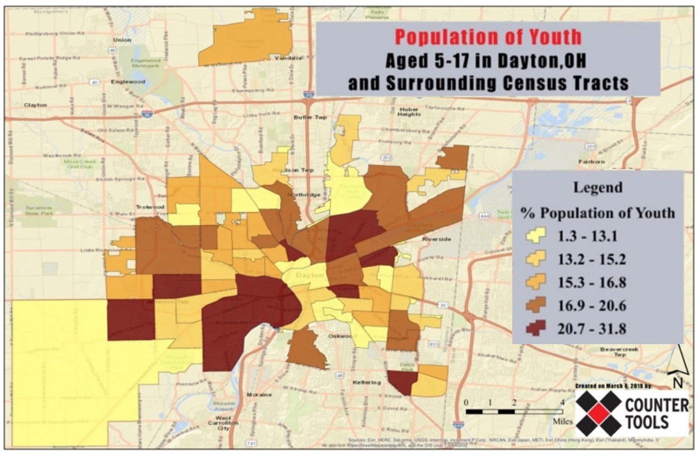
In Dayton, 78 of 84 (94.1%) of retailers surveyed that sold cigarillos, little cigars, or blunts, 52 of 75 (69.3%) sold singles, and 66 of 76 (86.8%) advertised them for less than $1.

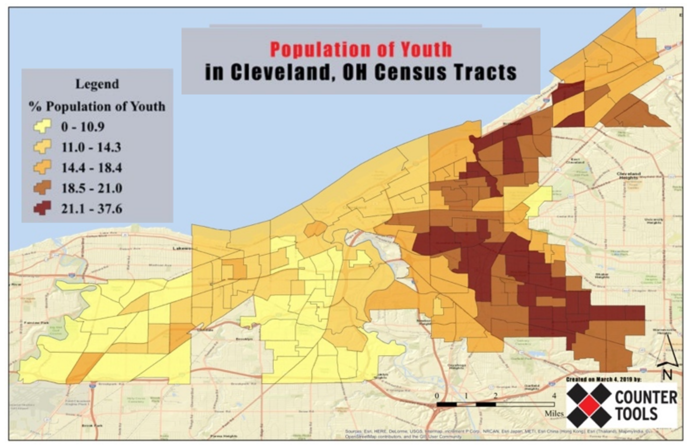
In Cleveland, of the 63 of 74 (85.1%) of retailers that sold cigarillos, little cigars, or blunts, 55 of 62 (88.7%) sold singles, and 50 of 61 (82%) advertised them for less than $1.

Price variation by neighborhood

In both cities, prices were cheaper in neighborhoods with more youth, who are a more price-sensitive group.

Average Cheapest Cigarette Pack Price by Percentage of Households with Youth Ages 5-17		
	Dayton	**Cleveland**
Census tracts least youth*	$5.31	$6.26
Census tracts with most youth**	$5.13	$5.51
**Dayton: 13.1% or less; Cleveland: 10.9% or less* ***Dayton:20.7% or more; Cleveland: 21.1% or more*		





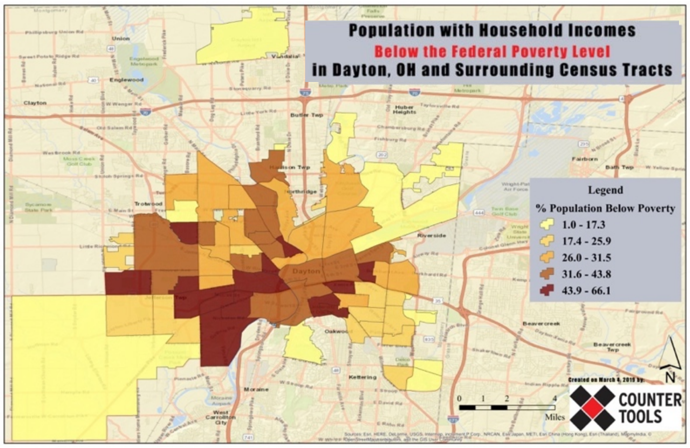
Price variation by income level and racial demographics

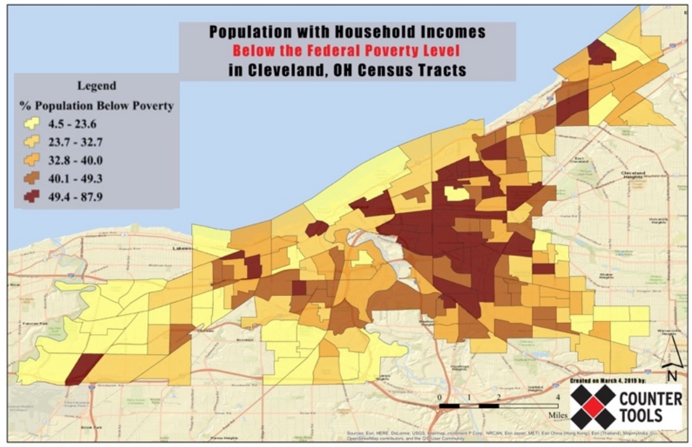
While lower-income smokers are more likely to purchase discount brand cigarettes,[40] the average cheapest prices were not found in the areas of greatest poverty in Dayton or Cleveland. However, nationally, about 12.3% of the population fell below the poverty line in 2017,[41] whereas the poverty rate was 35.2% in Cleveland and 32.7% in Dayton.[42] The high rates of poverty overall in these two cities may contribute to the lack of price variation seen by census tract compared to variations found nationally, where prices are lower in neighborhoods with more low-income and African-American residents.[43]

Similarly, national research has shown Newport menthol cigarettes to be cheaper in geographic areas with a higher proportion of African American residents.[44] Neither the store assessment results in Dayton (39.3% African American), nor in Cleveland (53.3% African-American) showed this pattern. However, the proportion of residents who are African-American in both of these cities is high compared to the proportion of the national population (13.4%),[45] which may have contributed to the lack of price variation compared to national trends.[46]

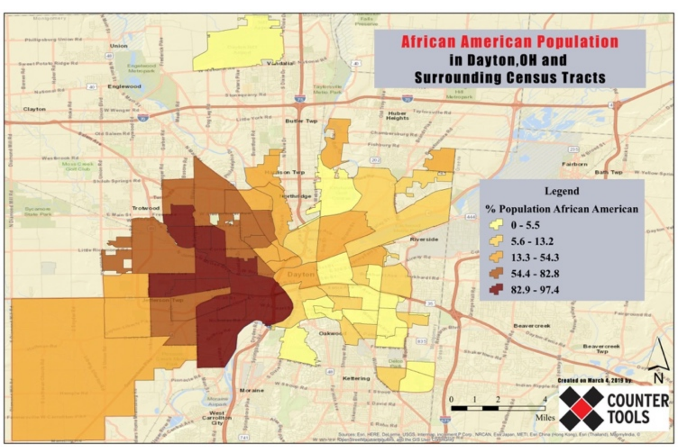
Income (% of households below the federal poverty level) and race (% African American) are moderately correlated in Cleveland (0.52) and in Dayton (0.56).

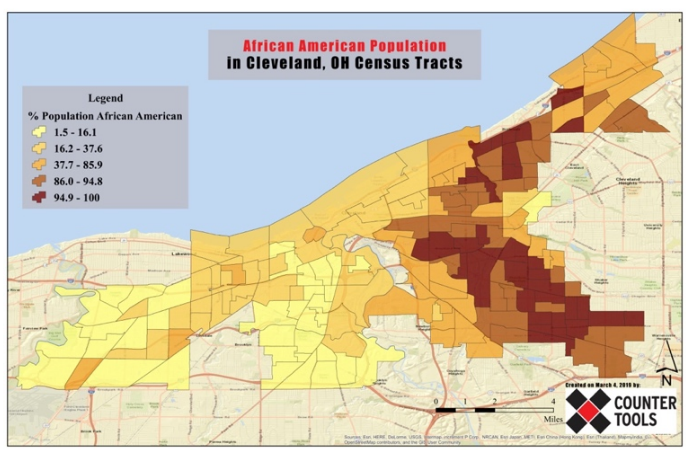
Average Cigarette Pack Prices by Percentage of Households Below the Federal Poverty Level				
	Dayton		**Cleveland**	
	Cheapest pack	Newport Menthol	Cheapest Pack	Newport Menthol
Census tracts with most household below poverty*	$5.06	$7.51	$6.01	$7.51
Census tracts with least households below poverty**	$4.71	$7.39	$5.83	$7.39
**Dayton: 43.9% or more; Cleveland: 49.4% or more **Dayton: 17.3% or less; Cleveland: 23.6% or less*				





Average Cigarette Pack Prices by Percentage of Non-Hispanic Black Residents				
	Dayton		**Cleveland**	
	Cheapest pack	Newport Menthol	Cheapest Pack	Newport Menthol
Census tracts with most African-American residents*	$4.92	$6.95	$6.08	$7.50
Census tracts with least African-American residents**	$4.76	$6.86	$6.08	$7.45
*Dayton: 82.9% or more; Cleveland: 94.9% or more **Dayton: 5.5% or less; Cleveland: 16.1% or less				





Promotion

In both cities, more than 70% of tobacco retailers surveyed had exterior tobacco advertisements. Of those retailers, in both cities over 90% included ads for flavored tobacco products.

Specifically, in Dayton, 67 of 86 (77.9%) tobacco retailers surveyed in Dayton had exterior ads for tobacco products. Of those,

- 64 of 66 (97%) had exterior ads for flavored tobacco products
- 59 of 64 (92.2%) had exterior ads for non-menthol cigarettes
- 60 of 65 (92.3%) had exterior ads for menthol cigarettes

In Cleveland, 52 out of 73 (71.2%) retailers in Cleveland had exterior ads for tobacco products.

- 47 out of 51 (92.2%) had exterior ads for any flavored tobacco products
- 41 out of 52 (78.9%) had exterior ads for non-menthol cigarettes
- 38 out of 51 (74.5%) had exterior ads for menthol cigarettes

Exterior Advertisements: Other Tobacco Products

Table interpretation:Ads for cigarillos, little cigars, or blunts were the most prevalent in both cities. In Dayton, exterior advertisements for smokeless tobacco (chew, snuff, dip, or snus) and e-cigarettes were more common than in Cleveland. Exterior ads for flavored cigarillos, little cigars, or blunts; smokeless tobacco, and e-cigarettes were common in both cities. The percentages reported for each assessment item only include stores for which data was available (excludes missing data).

	Dayton		Cleveland	
	% of retailers with any exterior ads n of N (%)	**% of retailers with exterior ads for flavored products** n of N (%)	**% of retailers with any exterior ads** n of N (%)	**% of retailers with exterior ads for flavored products** n of N (%)
Cigarillos, little cigars, or blunts	44 of 66 (66.7%)	32 of 39 (82.1%)	44 of 52 (84.6%)	37 of 43 (86.1%)
Traditional cigars	14 of 58 (24.1%)	14 of 17 (82.4%)	14 of 52 (26.9%)	8 of 13 (61.5%)
Chew, snuff, dip or snus	34 of 59 (57.6%)	28 of 32 (87.5%)	11 of 52 (21.5%)	6 of 6 (100%)
E-cigarette products	22 of 62 (35.5%)	18 of 21 (85.7%)	4 of 52 (7.7%)	3 of 4 (75%)
Hookah	11 of 54 (20.4%)	6 of 16 (37.5%)	2 of 52 (3.9%)	2 of 2 (100%)

Exterior Advertisements at Retailers Near Schools

When there are more tobacco retailers near schools, youth are more likely to experiment with smoking[47] and schools with more retailers within walking distance have higher smoking prevalences than schools with fewer retailers nearby.[48]

- In Dayton, 19 of 86 (22.1%) tobacco retailers surveyed were located within 1000ft of a school, and 14 of 15 (93.3%) tobacco retailers located within 1000ft of schools had exterior advertisements for flavored tobacco products compared to 50 of 51 (98.0%) tobacco retailers greater than 1000ft away from a school.

- In Cleveland, 34 of 74 (46%) of tobacco retailers surveyed (n=74) were located within 1000ft of a school, and 25 out of the 25 (100%) surveyed retailers located within 1000ft of schools had exterior advertisements for flavored tobacco products compared to 22 out of 26 (84.6%) of surveyed retailers located greater than 1000ft away from a school

Product Placement

While cigarettes and smokeless tobacco products are required by federal law to be kept behind the counter, other tobacco products, including flavored products, are permitted to be displayed within easy reach of youth without clerk assistance.

Retailers with Tobacco Products in Self-Service Displays

Table interpretation: Self-service displays were more prevalent in Dayton than in Cleveland. In both cities, they were most prevalent for cigarillos, little cigars, or blunts. The percentages reported for each assessment item only include stores for which data was available (excludes missing data).

	Dayton	Cleveland
Cigarillos, little cigars, or blunts	29 of 71 (40.9%)	9 of 62 (14.5%)
Traditional cigars	11 of 18 (61.1%)	6 of 22 (27.3%)
E-cigarette products	10 of 33 (30.3%)	3 of 18 (16.7%)
Hookah	4 of 8 (50%)	0 of 6 (0%)

- **Product placement near youth-oriented items:**
  - In Dayton, 40 of 79 (50.6%) retailers had tobacco products places within 12 inches of youth products, such as candy, ice cream, soda, or toys.
  - In Cleveland, 2 of 72 (2.8%) retailers had any tobacco products places within 12 inches of youth products, such as candy, ice cream, soda, or toys.
- **Tobacco advertisements at Kids' Eye Level**:
  - 41 of 76 (54%) retailers had tobacco advertisements placed within 3 ft of the floor right at kids' eye level.
  - In Cleveland, 12 of 74 (16.2%) retailers had any tobacco advertisements placed within 3 ft of the floor, right at kids' eye level.

Discussion

Next steps

Local governments across the country have taken action since 2009 to restrict the sale of flavored tobacco products. As of December 2018, 181 localities have passed restrictions on the sale of flavored tobacco products. Some places that originally excluded menthol cigarettes from their policies are now amending their laws to include them. These policies take various forms, from restricting the sale of all flavored tobacco products to adult-only stores, as has been done in Minneapolis and St. Paul, MN, to a comprehensive sales ban as seen in San Francisco, CA. While some places have also restricted the sale of flavored products near schools, this approach can pose some challenges, from determining which stores fall within the given radius to the need for educating those stores on the policy, to ensuring ongoing enforcement in conducted at the appropriate stores.

Given the broad availability of flavored tobacco product in both Dayton and Cleveland, any policy that restricts the sale of flavored tobacco product is likely to benefit public health in these cities. In both places, all or nearly all stores near schools sold and advertised flavored tobacco products outside. Exposure to tobacco marketing and advertising contributes to youth tobacco use initiation.[49] Children and adolescents more frequently exposed to point-of-sale tobacco promotion have 1.6 times higher odds of having tried smoking and 1.3 times higher odds of being susceptible to future smoking compared to those less frequently exposed.[50] Restricting the sale of flavored tobacco products in these stores would likely reduce youth exposure to the products. Restricting the sale of tobacco products to adult-only stores would further reduce youth exposure to tobacco, as speciality tobacco shops, which are often adult-only, comprised only 6% of the surveyed stores in Dayton, and in Cleveland, tobacco shops comprised only 1.4% while vape shops were only 2.7%.

While hookah is one of the most popular flavored tobacco products among youth, it was available in only about 10% of store surveyed in both cities, though of those stores, nearly all sold flavored hookah.

Like other products, flavored versions of smokeless tobacco are most popular among youth, with nearly two-thirds of high school students who use smokeless tobacco using flavored smokeless tobacco.[51] Smokeless tobacco, popular in the Midwest, was available at more than two-thirds of stores in Dayton (68.8%), while available at only about a quarter of stores in Cleveland (25.7%). While menthol- and other-flavored smokeless tobacco were also available are a higher percentage of stores in Dayton (menthol-flavored in 98.1% and other-flavored 88.5%), most stores that sold smokeless tobacco in Cleveland still had flavored versions available with 84.2% selling menthol-flavored and 63.2% selling other flavors.

In Cuyahoga County, where Cleveland is located, 13.1% of high school students reported current cigar use (including cigarillos and little cigars) in 2017, compared to 6.2% that reported current cigarette use.[52] Cigarillos, little cigars, and blunts are very widely available in Cleveland (sold at 85.1% of stores). Given the high prevalence of flavored cigarillos, little cigars, and blunts in Cleveland and the city's high rate of youth use of these products, Cleveland could also consider minimum pricing and pack sizes to further restrict youth access.

While e-cigarette use has surged nationally among youth, the e-cigarette products were less available than expected in both Dayton and Cleveland, though e-cigarettes were more available in Dayton than in Cleveland. Dr. Erika Trapl, Associate Director, of the Prevention Research Center for Healthy Neighborhoods at Case Western Reserve University, noted that vaping has not hit the city of Cleveland as much as other markets, though in the suburbs outside city limits, it is more of an issue. While 15.7% of Cuyahoga County high schoolers reported current e-cigarette use in 2017, those products were less available within the City of Cleveland. In Dayton, data collectors noted that e-cigarettes were less available in the inner city. Recent evidence from other studies are beginning to find disparities in the availability of e-cigarettes. A 2018 study conducted in New York City found that potentially less harmful products like smokeless tobacco and e-cigarettes were more likely to be sold in neighborhoods with more white and higher-income residents, potentially contributing to these results given the sociodemographic makeup of Cleveland.[53] Similarly, a 2016 study in Milwaukee found the e-cigarettes were more available in predominately white areas of the city.[54]

E-cigarette prevalence among youth is highly dynamic. Internal Truth Intiaitive data shows that it is continuing to grow. Especially as we can see from Nielsen data that the price of Juul It will be important to monitor youth use trends among various groups, as we suspect that youth use of products like Juul will expand from relatively higher income populations as prices drop.

Challenges and Lessons Learned

Turnover. Turnover both at local health departments or community organizations and at local-level governing bodies can pose a challenge to or delay successful point-of-sale policy change.

Identifying specific flavors and price promotions on specific flavors on crowded shelves. Store assessments collect vital information and evidence documenting tobacco industry marketing and promotion tactics at the point of sale. Because of menthol's differential treatment at the federal level, we thought it important to separately collect data on menthol-flavored tobacco products and other-flavored tobacco products. However, given the wide range of flavors available, particularly for e-cigarettes and cigarillos, little cigars, and blunts, it can be it can be a challenge for data collectors to determine without closely examining each product whether the products are mint-, menthol-, or wintergreen flavored or some other flavor with green-colored packaging. Because of this challenge, we did not require a yes or no answer to those questions in order to avoid erroneous data. However, as a consequence, several questions asking about flavored versions of tobacco product had a fair amount of missing data.

Monitoring data collection. In order to reduce the amount of missing data, it is important to monitor data collection to ensure all questons on the survey form are completed for every product. Without follow-up, we do not know whether data is missing because the answer was unable to be determined or because a data collector using a paper form accidentally skipped the question. Close monitoring allows confirmation or correction for data points that seem outside the norm (e.g. cigarettes advertised for $1.00). For the purposes of this project, Counter Tools provided initial training through a train-the-trainer model, but some information can get lost in translation, particularly when turnover in project management or data collector roles occurs.

Time and capacity. A store assessment campaign is ideally carefully planned to engage data collectors strategically. Even with the support of a mobile data collection and management tool such as the Store Audit Center, it takes time to recruit, train, and manage volunteers. In order to ensure sufficient staff time, capacity, and funding, local organizations and governments wishing to conduct store assessments should include it in their workplans for the year. The cities involved in this campaign were able to fit it into their existing workplans but had the benefit of the data collection software for efficiency as well as training and technical assistance to support the project and set them up for success.

Use of paper forms and enforcement of skip logic. This form includes several questions with complex skip logic. During this pilot, if data collectors completed the electronic version of the form on a mobile device, it automatically enforced skip logic. However, if data collectors completed a paper version of the form, they may not have followed the skip logic instructions printed on the form. Use of a mobile form should be required or strongly encouraged to ensure skip patterns are followed and both ensure high quality data and minimize data cleaning needs. When data collection teams prefer to use paper forms, lack access to a mobile data collection system, or lack internet connectivity, data should be thoroughly cleaned to manually enforce skip logic.

The Value of Store Assessments

The value of conducting store assessments goes beyond the use of the data collected. They can also serve as a tool for raising awareness of problems at the point of sale amongst data collectors, who can in turn become advocates for change and raise awareness throughout their communities. For these reasons, Counter Tools recommends involving data collectors strategically. For example, in Cleveland, coordinators from Case Western Reserve University recruited both community residents and student volunteers to collect the data. The community residents in particular were inspired to take action by what they saw in stores and now see the retail environment with different eyes. These community residents are hoping to testify at city council when the city considers restrictions on flavored tobacco products in the future. Involving a diverse group of data collectors can also help put store owners and clerks at ease, particularly in cities that are very segregated and where data collectors who do not match the demographics of the neighborhood may stand out. In Dayton, data collection was done by a combination of public health staff members and youth from the Montgomery County Juvenile Justice Center.

Conducting store assessments is also a way to document and identify disparities in point of sale advertising and product availability. While the pricing of cigarettes and availability of menthol cigarettes in Dayton and Cleveland did not match national trends of disparity, we only compared the quintile with the most households with African American residents or the most households below the poverty line to the quintile with the least African American residents or the least households below the poverty line. We also did not compare differences in advertising or discounting practices for menthol cigarettes or cigarillos and little cigars by neighborhood, which have both also shown disparities nationally. For this pilot study, we also did not conduct statistical tests to identify whether results were significantly different from one another.

Store assessments are also a way to track change in the retail environment over time. Dayton and Cleveland can now use this data to compare to previous and/or future store assessment data to track trends in product availability, prices, and promotion. Given the proposals for federal action on flavored e-cigarette, cigars, and menthol cigarettes announced FDA Commissioner Gottlieb in November 2018, and the draft compliance policy issued in March 2019 for flavored e-cigarettes and cigars, the cities could use this data to assess how these changes, if implemented, roll out on the ground. In addition, they can use the data to assess how availability of flavored products changes before and after any local or state policies are implemented.

In a 2015 study of national representative sample of counties across the country, counties that had performed retail tobacco assessments were more than six times as likely to have adopted point-of-sale policies than those that had not.[55] While we have not conducted a legal analysis of the state code of laws, Dayton and Cleveland, along with other cities in Ohio, appear to retain the authority the pass local laws regarding the sale of tobacco products. However, it is also critical to consult legal experts when considering new policies in order to assure the authority, legality, and comprehensiveness of the policy language. While store assessment data can serve as critical evidence for the need for policy change, documenting the problem is often only the first step. Plugging the data in to an organized campaign for change; raising awareness of the problem and solution amongst stakeholders, the community at large, and the communities most burdened by tobacco; and persuading decision makers to act are all important next steps in the policy change process. Store assessment data provides a catalyst to this process and a foundation of evidence for change to improve the health of the retail environment and reduce the burden of tobacco related death and disease in our communities.

---

[1] Courtemanche CJ, Palmer MK, Pesko MF. Influence of the Flavored Cigarette Ban on Adolescent Tobacco Use. American Journal of Preventive Medicine. 2017;52(5):e139-e146.
[2] Ibid
[3] Delnevo CD, Giovenco DP, Miller Lo, EJ. Changes in the Mass-merchandise Cigar Market since the Tobacco Control Act. Tobacco Regulatory Science. 2017;3(2 Suppl 1): S8-S-16.
[4] Viola AS, Giovenco DP, Miller Lo EJ, et al. A cigar by any other name would taste as sweet. Tobacco Control. 2016;25:605-606.
[5] Farley SM, Schroth KR, Grimshaw V*, et al*. Flavour chemicals in a sample of non-cigarette tobacco products without explicit flavour names sold in New York City in 2015. *Tobacco Control* 2018;**27:**170-176.
[6] Ambrose BK, Day HR, Rostron B. Flavored Tobacco Product Use Among US Youth Aged 12-17 Years, 2013-2014. JAMA. 2015; 314(17): 1871-1873. doi:10.1001/jama.2015.13802
[7] Huang L, Baker HM, Meernik C*, et al*. Impact of non-menthol flavours in tobacco products on perceptions and use among youth, young adults and adults: a systematic review. *Tobacco Control* 2017;**26:**709-719
[8] Sanders-Jackson A, Parikh NM, Schleicher, NC, Fortmann SP, Henriksen L. Convenience store visits by US adolescents: Rationale for healthier retail environments. Health & Place.2015;34: 3-66. *doi:10.1016/j.healthplace.2015.03.011*
[9] Chen J, Kettermann A, Ronston BL, Day, HR. Biomarkers of Exposure among U.S. Cigar Smokers: An Analysis of 1999–2012 National Health and Nutrition Examination Survey (NHANES) Data.
Cancer Epidemiol Biomarkers Prev. 2014; 13(12):2906-2915. DOI: 10.1158/1055-9965.EPI-14-0849
[10] Chaloupka FJ. Macro-social influences: the effects of prices and tobacco-control policies on the demand for tobacco products. *Nicotine & Tobacco Research* 1999; 1 Supple 1: S105-109.
[11] Slater SJ, Chaloupka FJ, Wakefield M, Johnston LD, O'Malley PM. The Impact of Retail Cigarette Marketing Practices on Youth Smoking Uptake. *Arch Pediatr Adolesc Med.*2007;161(5):440–445. doi:10.1001/archpedi.161.5.440
[12] Federal Trade Commission. FTC Releases Reports on Cigarettes and Smokeless Tobacco Sales and Marketing Expenditures for 2017. February 27, 2019. Accessed March 1, 2019. https://www.ftc.gov/news-events/press-releases/2019/02/ftc-releases-reports-cigarette-smokeless-tobacco-sales-marketing
[13] U.S. Department of Health and Human Services. Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2012.
[14] Cullen KA, Ambrose BK, Gentzke AS, Apelberg BJ, Jamal A, King BA. *Notes from the Field:* Use of Electronic Cigarettes and Any Tobacco Product Among Middle and High School Students — United States, 2011–2018. MMWR Morb Mortal Wkly Rep 2018;67:1276–1277. DOI: http://dx.doi.org/10.15585/mmwr.mm6745a5.
[15] https://www.fda.gov/TobaccoProducts/NewsEvents/ucm605729.htm
[16] Cullen KA, Ambrose BK, Gentzke AS, Apelberg BJ, Jamal A, King BA. Notes from the Field: Increase in use of electronic cigarettes and any tobacco product among middle and high school students – United States, 2011-2018. MMWR Morbidity & Mortality Weekly Report 2018; 67(45):1276-1277.
[17] Kuiper NM, Gammon D, Loomis B, Falvey K, Wang TW, King BA, Rogers T. Trends in Sales of Flavored and Menthol Tobacco Products in the United States During 2011–2015, *Nicotine & Tobacco Research*. 2018; 20 (6) 698–706. https://doi.org/10.1093/ntr/ntx123
[18] Cruz TB, Wright L, Crawford G. The Menthol Marketing Mix: Targeted Promotion for Focus Communities in the United States. Nicotine & Tobacco Research. 2010;12(s2):S147-S153. https://doi.org/10.1093/ntr/ntq201
[19] Lee JGL, Henriksen L, Rose SW, Moreland-Russell S, Ribisl KM. A systematic review of neighborhood disparities in point-of-sale tobacco marketing. American Journal of Public Health. 2015;105(9):E8-E18.
[20] Roberts ME, Berman ML, Slater MD, Hinton A, Ferkeitich AK. Point-of-sale tobacco marketing in rural and urban Ohio: Could the new landscape of tobacco products widen inequalities? Preventive Medicine. 2015;81:231-5.
doi: 10.1016/j.ypmed.2015.08.024

[21] Henriksen L, Schleicher NC, Dauphinee AL, & Fortmann SP. (2012). Targeted Advertising, Promotion, and Price For Menthol Cigarettes in California High School Neighborhoods. *Nicotine & Tobacco Research, 14(1)*, 1116-121. doi: 10.1093/ntr/ntr122

[22] Villanti, AC, et al., "Changes in the prevalence and correlates of menthol cigarette use in the USA, 2004-2014," Tobacco Control, published online October 20, 2016

[23] Anderson SJ. Marketing of menthol cigarettes and consumer perceptions: a review of tobacco industry documents. *Tobacco Control* 2011;**20:**ii20-ii28.

[24] Kuiper KM, Gammon G, Loomis B, Falvey K, Wang TW, King BA, Rogers T. Trends in Sales of Flavored and Menthol Tobacco Products in the United States During 2011–2015. Nicotine & Tobacco Research. 2018; 20(6):698–706, https://doi.org/10.1093/ntr/ntx123

[25] Villanti, AC, et al., "Changes in the prevalence and correlates of menthol cigarette use in the USA, 2004-2014," Tobacco Control, published online October 20, 2016

[26] Cantrell J, Kreslake JM, Ganz O, et al. Marketing Little Cigars and Cigarillos: Advertising, Price, and Associations With Neighborhood Demographics. *American Journal of Public Health*. 2013;103(10):1902-1909. doi:10.2105/AJPH.2013.301362.

[27] https://truthinitiative.org/tobacconation

[28] State Cigarette Excise Tax Rates & Rankings. Campaign for Tobacco Free Kids. Dec 21,2018. Accessed March 7, 2019. https://www.tobaccofreekids.org/assets/factsheets/0097.pdf

[29] 2017 Behavioral Risk Factor Surveillance System, as cited in American Lung Association. State of Tobacco Control 2019: Ohio State Highlights https://www.lung.org/our-initiatives/tobacco/reports-resources/sotc/state-grades/highlights.html

[30] Wang TW, Asman K, Gentzke AS, et al. Tobacco Product Use Among Adults — United States, 2017. MMWR Morb Mortal Wkly Rep 2018;67:1225–1232. DOI: http://dx.doi.org/10.15585/mmwr.mm6744a2.

[31] Behavioral Risk Factor Surveillance System, 2011-2013, as reported in the Montgomery County Community Health Assessment 2014. https://www.phdmc.org/agency-publications/92-community-health-assessment-2014-complete-report/file.

[32] BRFSS data. 2015. http://filecabinet.eschoolview.com/0C8C7FFE-4691-4E09-BF90-82CF01A2D09B/_Tobacco_themed_.pdf

[33] National Survey on Drug Use and Health, 2012-2012, as reported in the Montgomery County Community Health SNAPreport/file.

[34] https://www.census.gov/quickfacts/fact/table/daytoncityohio/PST045218

[35] Behavioral Risk Factor Surveillance System, 2011-2013, as reported in the Montgomery County Community Health Assessment 2014. https://www.phdmc.org/agency-publications/92-community-health-assessment-2014-complete-report/file.

[36] Frank JL, Kinsella A, Trapl ES, (Nov. 2017). Youth Data Brief: Youth Smoking in Cuyahoga County. Cleveland, OH: Prevention Research Center for Healthy Neighborhoods at Case Western Reserve University.

[37] BRFSS data. 2015. http://filecabinet.eschoolview.com/0C8C7FFE-4691-4E09-BF90-82CF01A2D09B/_Tobacco_themed_.pdf; http://filecabinet.eschoolview.com/0C8C7FFE-4691-4E09-BF90-82CF01A2D09B/_tobacco_demo_.pdf

[38] https://www.census.gov/quickfacts/fact/table/clevelandcityohio,daytoncityohio/PST045218

[39] Sanders-Jackson A, Parikh NM, Schleicher, NC, Fortmann SP, Henriksen L. Convenience store visits by US adolescents: Rationale for healthier retail environments. Health & Place.2015;34: 3-66. *doi:10.1016/j.healthplace.2015.03.011*

[40] Cornelius ME, Driezen P, Fong GT, et al. Trends in the use of premium and discount cigarette brands: findings from the ITC US Surveys (2002-2011). Tobacco Control. 2013; 23:i48-i53. doi:10.1136/tobaccocontrol-2013-051045

[41] Fontenot, K, Semega J, Kollar M. U.S. Census Bureau, Current Population Reports, P60-263, Income and Poverty in the United States: 2017, U.S. Government Printing Office, Washington, DC, 2018. Retrived from https://www.census.gov/library/publications/2018/demo/p60-263.html

[42] https://www.census.gov/quickfacts/fact/table/daytoncityohio,clevelandcityohio/PST045217

[43] Lee JGL, Henriksen L, Rose SW, Moreland-Russell S, Ribisl KM. A systematic review of neighborhood disparities in point-of-sale tobacco marketing. American Journal of Public Health. 2015;105(9):E8-E18.

[44] Henriksen L, Schleicher NC, Barker DC, Liu Y, Chaloupka FJ. Prices for Toabcco and Nontobacco Products in Pharmacies Versus Other Stores: Results From Retail Marketing Surveillance in California and in the United States. American Journal of Public Health. 2016;106 (10): 1858-1864. doi:10.2105/AJPH.2016.303306

[45] https://www.census.gov/quickfacts/fact/table/US/PST045217

[46] Lee JGL, Henriksen L, Rose SW, Moreland-Russell S, Ribisl KM. A systematic review of neighborhood disparities in point-of-sale tobacco marketing. American Journal of Public Health. 2015;105(9):E8-E18.

[47] McCarthy WJ, Mistry R, Lu Y, Patel M, Zheng H, Dietsch B. Density of tobacco retailers near schools: effects on tobacco use among students. American Journal of Public Health. 2009;99(11)2006-13 doi: 10.2105/AJPH.2008.145128.

[48] Henriksen L, Feighery EC, Schleicher NC, Cowling DW, Kline RS, Fortmann SP. Is adolescent smoking related to the density and proximity of tobacco outlets and retail cigarette advertising near schools? Preventive Medicine. 2008;47(2):210-4. doi:10.1016/j.ypmed.2008.04.008.
[49] National Cancer Institute. The Role of the Media in Promoting and Reducing Tobacco Use. Tobacco Control Monograph No. 19. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute. NIH Pub. No. 07-6242, June 2008.
[50] Robertson L, Cameron C, McGee R, Marsh L, Hoek J. Point-of-sale tobacco promotion and youth smoking: a meta-analysis. Tobacco Control. 2016;25:e83-e89. doi:10.1136/tobaccocontrol-2015-05286
[51] Corey CG, Ambrose BK, Apelberg BJ, King BA. Flavored Tobacco Product Use Among Middle and High School Students - United States, 2014. MMWR Morb Mortal Wkly Rep. 2015;64(38):1066-1070.
[52] Frank JL, Kinsella A, Trapl ES, (Nov. 2017). Youth Data Brief: Youth Smoking in Cuyahoga County. Cleveland, OH: Prevention Research Center for Healthy Neighborhoods at Case Western Reserve University.
[53] Giovenco DP, Spillane TE, Merizier, JM. Neighborhood Differences in Alternative Tobacco Product Availability and Advertising in New York City: Implications for Health Disparities, Nicotine & Tobacco Research, nty244, https://doi.org/10.1093/ntr/nty244
54 Laestadius L, Sebero H, Myers H, Mendez E, Auer P. Identifying Disparities and Policy Needs with the STARS Surveillance Tool. Tobacco Regulatory Science. 2018; 4: 12-21(10) https://doi.org/10.18001/TRS.4.4.2
[55] Coombs TB, Brosi DB, Chaitan VL, He E, Luke DA, Henricksen L. Local Retail Tobacco Environment Regulation: Early Adoption in the United States. 2019; S(1):76-86. : https://doi.org/10.18001/TRS.5.1.7

Standardized Tobacco Assessment for Retail Settings: Flavored Tobacco (fSTARS)

Version 1.0 fSTARS and its accompanying Training Guide are available for free at www.countertobacco.org/fSTARS

YOUR NAME ____

STORE NAME ____

ADDRESS ____

CITY, STATE ____ **ZIP**____________________

DATE ___________________ **START TIME** ____________ **END TIME**____________________

SURVEY

1. Can you visit the store?

- ☐ Yes [*Continue*]
- ☐ No, store does not exist [*Skip to Q19a*]
- ☐ No, store closed [*Continue with Q2-Q5, then skip to Q19a*]
- ☐ No, under 18 not allowed [*Continue with Q2-Q5, then skip to Q19a*]
- ☐ No, members only [*Continue with Q2-Q5, then skip to Q19a*]
- ☐ No, unsafe [*Skip to Q19a*]
- ☐ No, other reason not listed [*Continue with Q2-Q5, then skip to Q19a*]

2. Does the actual store name match the assigned store name?

- ☐ Yes [*Continue*]
- ☐ No – Enter correct name: ______________________________

3. Does the actual store address match the assigned store address?

- ☐ Yes [*Continue*]
- ☐ No – Enter correct address: ______________________________

4. Choose one best store type:

- ☐ Convenience store with or without gas
- ☐ Drug store or pharmacy
- ☐ Beer, wine, liquor store
- ☐ Grocery store
- ☐ Mass merchandiser
- ☐ Tobacco shop
- ☐ Vape shop
- ☐ Other store type not listed

EXTERIOR

5. Are any tobacco products advertised anywhere outside the store? These are ads on windows/doors facing out, building, sidewalk, gas pumps or elsewhere.

- ☐ Yes [*Continue*]
- ☐ No [*Skip to Q6a*]

If yes, please indicate which of the following products are ADVERTISED anywhere outside the store:

a.	Cigarettes – Non-menthol	☐ Yes	☐ No
b.	Cigarettes – menthol	☐ Yes	☐ No
c.	Cigarillos/little cigars/blunts	☐ Yes	☐ No *[Skip to Q5e]*
d.	FLAVORED cigarillos/little cigars/blunts (including mint, menthol, or wintergreen)	☐ Yes	☐ No
e.	Traditional cigars	☐ Yes	☐ No *[Skip to Q5g]*
f.	FLAVORED traditional cigars (including mint, menthol, or wintergreen)	☐ Yes	☐ No

g.	Chew, snuff, dip, or snus?	☐ Yes	☐ No [*Skip to Q5i]*
h.	FLAVORED chew, snuff, dip, or snus (including mint, menthol, or wintergreen)	☐ Yes	☐ No
i.	E-Cigarettes	☐ Yes	☐ No [*Skip to Q5k]*
j.	FLAVORED e-cigarettes (including mint, menthol, or wintergreen)	☐ Yes	☐ No
k.	Hookah	☐ Yes	☐ No [*Skip to Q6a]*
l.	FLAVORED Hookah (including mint, menthol, or wintergreen)	☐ Yes	☐ No

INTERIOR

6a. Is WIC accepted here?

- ☐ Yes [*Continue*]
- ☐ No [*Continue*]
- ☐ Unsure [*Continue*]

6b. Is SNAP accepted here?

- ☐ Yes [*Continue*]
- ☐ No [*Continue*]
- ☐ Unsure [*Continue*]

7. Are alcoholic beverages sold here?

- ☐ Yes [*Continue*]
- ☐ No [*Continue*]

8. Is a pharmacy counter present?

- ☐ Yes [*Continue*]
- ☐ No [*Continue*]

9. Is tobacco sold here?

- ☐ Yes [*Continue*]
- ☐ No [*Skip to Q19a*]

10. Are there indications that mobile tobacco coupons are accepted here?

- ☐ Yes [*Continue*]
- ☐ No [*Continue*]

11. Are ANY tobacco products placed within 12" of youth products?

- ☐ Yes [*Continue*]
- ☐ No [*Continue*]

12. Are ANY tobacco products advertised within 3 feet of the floor?

- ☐ Yes [*Continue*]
- ☐ No [*Continue*]

CIGARETTES

13. Answer these questions about CIGARETTES:

a.	Are any cigarettes SOLD here?	☐ Yes	☐ No *[Skip to 14a]*
b.	Are any NON-MENTHOL cigarettes SOLD here?	☐ Yes	☐ No
c.	Are MENTHOL cigarettes SOLD here?	☐ Yes	☐ No
d.	Are Newport Menthol cigarette single packs (regular hard pack) sold here?	☐ Yes	☐ No *[Skip to 13f]*
e.	Enter the advertised price of Newport Menthol cigarette single pack (regular hard pack):	$___ ___ . ___ ___	
f.	Are any cigarettes with menthol capsules in the filter sold here? (e.g. Camel Crush, Marlboro NXT)?	☐ Yes	☐ No

g.	Enter CHEAPEST advertised price of a single cigarette pack:	$___ ___ . ___ ___	
h.	Enter BRAND information for the cheapest single cigarette pack (e.g. Pall Mall Blue, Doral Red, Traffic Menthol Green)	______________________	
i.	Are there ANY cigarette price promotions?	☐ Yes	☐ No *[Skip to 14a]*
j.	Are there any NON-MENTHOL cigarette price promotions?	☐ Yes	☐ No
k.	Are there any MENTHOL cigarette price promotions?	☐ Yes	☐ No

CIGARILLOS/LITTLE CIGARS/BLUNTS

14. Answer these questions about CIGARILLOS/LITTLE CIGARS/BLUNTS:

a.	Are any cigarillos, little cigars, or blunts SOLD here?	☐ Yes	☐ No *[Skip to 15a]*
b.	Are FLAVORED cigarillos, little cigars, or blunts SOLD here?	☐ Yes	☐ No *[Skip to 14e]*
c.	Are cigarillos, little cigars, or blunts flavored with MINT, MENTHOL, or WINTERGREEN sold here?	☐ Yes	☐ No
d.	Are cigarillos, little cigars, or blunts with flavors OTHER THAN mint, menthol, or wintergreen sold here?	☐ Yes	☐ No
e.	Any there ANY cigarillos, little cigars, or blunts price promotions?	☐ Yes	☐ No *[Skip to 14h]*
f.	Any price promotions for cigarillos, little cigars, or blunts flavored with mint, menthol, or wintergreen?	☐ Yes	☐ No
g.	Any price promotions for cigarillos, little cigars, or blunts with flavors OTHER THAN mint, menthol, or wintergreen?	☐ Yes	☐ No
h.	Are any cigarillos, little cigars, or blunts with AMBIGUOUS flavor descriptors sold here? (e.g., Black and Mild "Jazz," Garcia y Vega "Blue," Swisher Sweets "Island Madness")	☐ Yes	☐ No
i.	If yes, enter brand name	______________________	
j.	Are any SINGLE cigarillos, little cigars, or blunts sold here?	☐ Yes	☐ No
k.	Are any cigarillos, little cigars, or blunts advertised for less than $1	☐ Yes	☐ No
l.	Are any cigarillos, little cigars, or blunts in self-service displays?	☐ Yes	☐ No

TRADITIONAL CIGARS

15. Answer these questions about TRADITIONAL CIGARS:

a.	Are traditional cigars SOLD here?	☐ Yes	☐ No *[Skip to 16a]*
b.	Are traditional cigars flavored with MINT, MENTHOL, or WINTERGREEN sold here?	☐ Yes	☐ No
c.	Are traditional cigars with flavors OTHER THAN mint, menthol, or wintergreen sold here?	☐ Yes	☐ No
d.	Are any cigarillos, little cigars, or blunts in self-service displays?	☐ Yes	☐ No

CHEW/SNUFF/DIP/SNUS

16. Answer these questions about CHEW/SNUFF/DIP/SNUS:

a.	Is chew, snuff, dip, or snus SOLD here?	☐ Yes	☐ No *[Skip to 17a]*
b.	Is chew, snuff, dip, or snus flavored with MINT, MENTHOL, or WINTERGREEN sold here?	☐ Yes	☐ No
c.	Is chew, snuff, dip, or snus with flavors OTHER THAN mint, menthol, or wintergreen sold here?	☐ Yes	☐ No
d.	Any there ANY price promotions for chew, snuff, dip, or snus?	☐ Yes	☐ No [Skip to 17h]
e.	Any price promotions for chew, snuff, dip, or snus flavored with mint, menthol, or wintergreen?	☐ Yes	☐ No
f.	Any price promotions for Is chew, snuff, dip, or snus with flavors OTHER THAN mint, menthol, or wintergreen?	☐ Yes	☐ No

E-CIGARETTE PRODUCTS

17. Answer these questions about E-CIGARETTE PRODUCTS:

a.	Are e-cigarette products SOLD here?	☐ Yes	☐ No *[Skip to 18a]*
b.	Are e-cigarette products flavored with MINT, MENTHOL, or WINTERGREEN sold here?	☐ Yes	☐ No *[Skip to 17e]*
c.	Is BLU DISPOSABLE E-CIGARETTE MENTHOL (single) sold here?	☐ Yes	☐ No
d.	Enter price	$ ___ ___.___ ___	
e.	Are e-cigarette products with flavors OTHER THAN mint, menthol, or wintergreen sold here?	☐ Yes	☐ No
f.	Any there any e-cigarette price promotions?	☐ Yes	☐ No *[Skip to 17i]*
g.	Any price promotions for e-cigarette products flavored with mint, menthol, or wintergreen?	☐ Yes	☐ No
h.	Any price promotions for e-cigarette products with flavors OTHER THAN mint, menthol, or wintergreen?	☐ Yes	☐ No
i.	Are e-liquid in droppers sold here?	☐ Yes	☐ No
j.	Are any "pod mod" e-cigarette products sold here (e.g. JUUL, MyBlu, etc.)	☐ Yes	☐ No
k.	Are any e-cigarette products advertised as containing zero nicotine sold here?	☐ Yes	☐ No
l.	Are any e-cigarette products in self-service displays?	☐ Yes	☐ No

HOOKAH/SHISHA/ARGILEH

18. Answer these questions about HOOKAH/SHISHA/ARGILEH

a.	Is hookah SOLD here?	☐ Yes	☐ No *[Skip to 19a]*
b.	Any hookah flavored with MINT, MENTHOL, or WINTERGREEN sold here?	☐ Yes	☐ No
c.	Any hookah with flavors OTHER THAN mint, menthol, or wintergreen sold here?	☐ Yes	☐ No
d.	Any hookah with AMBIGUOUS FLAVOR DESCRIPTORS sold here (e.g. Starbuzz "Blue Mist")?	☐ Yes	☐ No
e.	Any there any hookah price promotions?	☐ Yes	☐ No *[Skip to 18h]*
f.	Any price promotions for hookah flavored with mint, menthol, or wintergreen?	☐ Yes	☐ No
g.	Any price promotions for hookah with flavors OTHER THAN mint, menthol, or wintergreen?	☐ Yes	☐ No
h.	Is any hookah in self-service displays?	☐ Yes	☐ No

FINISH

19a. ALMOST DONE! ANY FIELD NOTES?

☐ Yes [*Continue*]
☐ No [*Skip to end*]

19b. Enter field notes:

____

____

____

____

THIS IS THE LAST QUESTION. THANKS FOR DOING THE SURVEY!