Tobacco Marketing in California’s Retail Environment (2011-2014)

Final report for the California Tobacco Advertising Survey (2014)
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EXECUTIVE SUMMARY

The purpose of the 2014 California Tobacco Advertising Study (CTAS) was to characterize the retail availability of flavored tobacco products as well as electronic nicotine delivery systems (ENDS). The study assessed change over time in the promotion, placement and price of select products since 2011. It also monitored change in compliance with state-mandated age-of-sale signs. This report includes the following key findings, based on a statewide random sample of 579 licensed tobacco retailers that sell cigarettes:

- There was a dramatic increase in the availability of e-cigarettes and other ENDS, from 11.5 percent in 2011 to 66.7 percent in 2014.
- More than half of stores (56.1 percent) sold flavored varieties of e-cigarettes or other ENDS, including menthol, alcohol and fruit/candy flavors.
- Nearly one-third of stores (32.5 percent) displayed ENDS on the front counter, and 14.0 percent displayed them within a foot of items that are popular with kids, such as candy, gum, mints, toys, slushie machines, or ice cream.
- Most stores (82.9 percent) sold flavored varieties of little cigars/cigarillos (LCCs): fruit, sweet or candy flavors were most common (74.1 percent), and more than half of stores (53.4 percent) sold alcohol-flavored LCCs, such as wine grape, rum, cognac, and honey bourbon.
- Most stores (71.6 percent) sold LCCs for less than $1.
- LCCs were the most widely advertised type of tobacco product after combustible cigarettes, as indicated by the proportion of stores with at least one advertisement: Just over half of all stores (56.1 percent) advertised LCCs, while a large majority (84.3 percent) advertised cigarettes. Just under half (46.8 percent) of the stores advertised e-cigarettes or other ENDS.
- Nearly every store that sold cigarettes sold menthol varieties (97.4 percent of stores), and the majority (60.8 percent) advertised discounts for menthol cigarettes.
- Newport, the leading brand of menthol cigarettes, cost less in communities with higher proportions of African American and Asian/Pacific Islander residents.
- The cheapest pack of cigarettes sold in California stores costs an average of $4.27. Cigarettes cost less than a variety of grocery staples, including a pound of ground beef, coffee beans or potato chips, as well as a half-gallon of ice cream.
- The availability of price discounts for tobacco products increased significantly since 2011: most stores (67.0 percent) advertised at least one discount for cigarettes, and a quarter (28.3 percent) advertised at least one discount for chew or snus.
- Tobacco advertisements at children’s eye level were found in nearly a third (32.6 percent) of stores, which was a small but significant decrease from 2011.
- Compliance with state law improved: STAKE Act signs were present in 91 percent of stores, which was a significant increase from 2011 (76 percent).

Background

The California Tobacco Advertising Survey (CTAS) represents the longest-running tobacco marketing surveillance system in any state in the nation. The most recent survey was conducted in the summer of 2014 before CVS Caremark discontinued selling tobacco products, and at the same time that Reynolds American introduced their e-cigarette, VUSE.

The proliferation of advertising and price discounts for tobacco products in the retail environment is among the most important ways the tobacco industry maintains its commercial influence in California. Since 2011, annual marketing expenditures for tobacco products increased from $8.4 billion to $9.3 billion in 2012, the most recent year for which the Federal Trade Commission reports these data for cigarettes and smokeless tobacco.(1,2) Assuming that spending is proportional to population size across states, this means that the industry spent approximately $1.13 billion in California on tobacco advertising and promotions in 2012, equivalent to almost $30 per Californian.
Not included in these figures are expenditures to promote e-cigarettes and other electronic nicotine delivery systems (ENDS). Over the last five years, marketing expenditure on ENDS has increased exponentially from $12 million in 2010 to $125 million in 2014.(3)

In spite of its importance to the tobacco industry, or perhaps because of it, the retail environment is the least regulated channel for tobacco marketing.(4) The retail availability and visibility of tobacco products makes it more likely that adolescents will try smoking and less likely that smokers will succeed in quitting.(5) The impact of additional cues for electronic smoking products and the proliferation of flavored tobacco products at the point of sale is not yet known.

California is one of only a handful of states that routinely monitors tobacco-industry activity at the point of sale, even though such surveillance is essential to inform evidence-based policy making. The purpose of the 2014 California Tobacco Advertising Study (CTAS) was to characterize the retail availability of flavored tobacco products as well as electronic nicotine delivery systems (ENDS). In 2014, the survey for the first time monitored retail availability of various types of ENDS, flavors of ENDS and little cigarillos/little cigars (LCCs), and the placement, promotion and price of the two leading brands of e-cigarettes at the time data was collected.

Marketing surveillance methods

CTAS is a longitudinal cohort study of state licensed tobacco retailers that sell cigarettes. Following eligibility criteria that were established previously, the sampling excluded stores that required either club membership (e.g., Costco or golf courses) or had minimum-age restrictions (e.g., bars). Also excluded were unusual store categories that were unlikely to display or advertise tobacco products, such as donut shops. Since 2000, standardized observations of tobacco marketing materials in stores were made at eight time points (in 2000, annually from 2002 to 2005, in 2008, 2011, and in 2014). This report describes changes in tobacco product availability, promotion, price, and placement since 2011 (6).

Sample

The baseline sample (CTAS 2011) is historical. The original sample was derived from a 1997 list of 40,186 cigarette retailers, as enumerated by the California Board of Equalization (BOE). The baseline sample stores and addresses were matched to the 2013 retailer licensing list, which was supplied by the BOE to the California Tobacco Control Program. Of the 566 stores with valid data in 2011, 454 (80.2 percent) had completed store observations in 2014. In order to identify replacement stores, a randomly selected list of stores from the 2013 licensing list was phone verified. The resulting list was used to replace all 2011 stores that were no longer in business or no longer sold cigarettes and to increase the sample. Figure 1 (see Appendix A) illustrates the location of the stores in the longitudinal sample with respect to population density in each county.

Protocol

There were important differences between the CTAS survey since 2011. In 2014, data for this retail marketing surveillance survey were collected with an iPad rather than a paper-and-pencil instrument. The 2014 survey also differed in content: Data collectors did not enumerate marketing materials for cigarettes and smokeless tobacco as they had in previous years. Instead, the survey examined a broader range of tobacco products, placed more emphasis on monitoring product flavors, product placement, promotion, and price, and less emphasis on advertising quantity and content. The reason for these changes was to implement a marketing surveillance survey that was more responsive to state and local policy making objectives.

New to CTAS 2014 are data about the availability of little cigars or cigarillos (LCCs) separately from large cigars. Availability of flavored varieties was recorded in three categories: menthol/mint, fruit/sweet/candy, and liquor for LCCs, ENDS and chewing tobacco/snus. As in 2011, price was collected for a single pack purchase of Marlboro non-menthol and Newport menthol. In 2014, data collectors recorded the price for fewer brands of cigarettes, added the cheapest pack of cigarettes (regardless of brand) and started monitoring prices for other tobacco products (LCCs and chew), and for e-cigarettes.

Measures

This section describes the measures that are central to this report, and the complete store observation survey is found in Figure 1.

Store type: Data collectors classified stores into one of eight categories: chain convenience with or without gas, pharmacy, liquor store, small market, supermarket (at least three cash registers), gas only (kiosk without interior shopping section), tobacco shop, and other (Walmart, BJ’s Dollar General, etc.). The few gas only and tobacco shops were combined into one category with other stores.

Product availability: Due to the study’s inclusion criteria, all stores sold cigarettes. In 2011 and 2014, availability of LCCs, chew, snus and e-cigarettes was recorded. In 2014, product availability was also expanded to include loose or pipe tobacco, large cigars, blunt/cigar wraps, and hookah (shisha/tobacco or hookah pipe). For ENDS, availability was recorded separately for disposable e-cigarettes (also called “disposable cigarette lookalikes”), rechargeable/refillable e-cigarettes (also called “reusable cigarette lookalikes”), vape pens/tanks/MODS, e-hookah, e-cigarettes and e-liquids.
Flavors: The 2014 data collection expanded from the 2011 survey, which coded just the presence of advertising for menthol cigarettes, to coding the availability and advertising for other flavored tobacco in addition to ads for menthol cigarettes. The availability of flavored tobacco products was coded separately for cigarettes, LCCs, chew/snus, and ENDS. For cigarettes, data collectors recorded whether menthol cigarettes were sold. For all other categories of products, data collectors recorded the presence of any menthol/mint flavors, fruit/sweet/candy flavors (e.g., cherry, vanilla, chocolate), or liquor flavors (e.g., rum, wine, brandy). Throughout this report, the term “flavored tobacco products” refers to the subset of products that is marketed with terms that refer to menthol/mint, fruit/sweet/candy, or alcohol flavors.

Product placement: Visibility and location of cigarettes, snus/chewing tobacco, LCCs and ENDS were recorded. New to the 2014 survey, data collectors categorized the location of products within the store, identifying which tobacco products were placed on the front counter and available in self-service displays. Also new to 2014, data collectors recorded the presence of products “near kid-friendly” items, defined as within 12 inches of candy, gum, mints, toys, soda/slushie machines, or ice cream.

Promotion: This section considers types of marketing materials, price promotions, and countermarketing (e.g., age-of-sale signage). All variables were coded separately for the store exterior and interior.

Rather than counting the number of cigarette marketing materials (branded signs, shelving units, displays, and functional items) as was done in 2011, data collectors recorded the presence of any marketing material for cigarettes, chew/snus, LCCs and ENDS, indicated the presence of any advertisements that were placed at or below 3 feet, and the presence of any price promotion for four categories of tobacco products (cigarettes, chew/snus, LCCs and ENDS). In 2011, marketing materials were coded separately for chewing tobacco and snus but in 2014 these two product categories were merged into one category because they are taxed similarly.

Coders indicated the presence of marketing materials on the front counter, back counter/wall, on doors or windows, elsewhere in the store, and at or below 3 feet. This was recorded for ENDS generally and for Blu (owned by Lorillard Tobacco, then the third largest tobacco company in the U.S., at the time of data collection) and NJOY (owned by a company that does not make cigarettes, Sottera/NJOY), specifically. These brands were selected because they were the two most popular at the time of data collection (7) and represented different types of corporate owners.

As with product availability, the 2014 data collection expanded coding of marketing materials to include the presence of marketing materials by product flavor (yes/no). New to 2014, coders indicated the presence of “image” advertising, defined as any imagery other than brand name/logo, package and price.

Outside the store, presence of signs and functional items at or below three feet was recorded by product and flavor (yes/no). For exterior advertisements, there were two location options: on clear window/door, or elsewhere (e.g., gas pump, sidewalk, building side).

The presence of a price promotion (any type of discount) was collected by product type and flavor (yes/no) for the interior (including on-pack) and exterior. Promotions (excluding cartons) were categorized as: multi-buy, special price on one, or cross-product. A special price was defined as wording on an advertisement or display indicating a special price, such as: “special value”, “special offer”, “on sale” or “reduced price”. Promotional offers for free products with the purchase of a product, or discount when purchased at a certain quantity were recorded as multi-buy discounts (e.g., buy-one-get-one free or discounted price when you buy five packs). Data collectors also recorded the presence of cross-product promotions (e.g., free or discounted snus or e-cigarettes with purchase of conventional cigarettes).

Countermarketing: Consistent with previous years, the presence of interior STAKE Act signs was recorded.

Price: The 2014 survey collected prices for fewer brands of cigarettes and many more types of tobacco products. As in previous years, price data were collected for a single pack purchase of Marlboro Red (Philip Morris USA), which is the leading non-menthol premium brand and the largest market share of all cigarette brands; and Newport menthol (Lorillard), which is the leading premium brand and the largest market share of menthol brands. Price for Camel, Basic and Doral was not collected because of diminishing market share and low availability in 2011. Instead, data collectors obtained price for Pall Mall red (Reynolds American), which was the leading value brand and fastest growing cigarette brand in the United States (8). New in the 2014 survey was the price of the cheapest pack of cigarettes regardless of brand and variety (menthol or non-menthol). This question required data collectors to ask the clerk for the price of the cheapest cigarette pack. For reference, we compared this price to prices of select non-tobacco products from the Consumer Price Index market basket for western states, August 2015 (9).

Also new to the 2014 survey were prices for disposable e-cigarettes, chewing tobacco, and a non-tobacco product, bottled water. Data collectors recorded prices for both tobacco and menthol varieties of the two leading disposable e-cigarettes at the time, Blu and NJOY, as well as for the two leading brands of chewing tobacco, Grizzly (wintergreen) and Copenhagen (regular flavor).
Data collection: Six data collectors from Ewald & Wasserman Research, LLC (San Francisco) were trained using a combination of classroom and field training. Data were collected in August and September, 2014. To assess inter-rater reliability, two different coders visited eight percent of stores (n=44) on separate occasions. Reliability was within acceptable ranges (see Table 16) and consistent with other studies (6,10).

Analyses

The goal of the longitudinal analyses of these data is to describe change over time and to relate changes in retail tobacco marketing to neighborhood demographics, and the goal of the cross-sectional analyses is to characterize several new measures that pertain to flavored tobacco products, ENDS availability, and product placement. Descriptive statistics are summarized for each product, by year and/or by store type. For all analyses, convenience stores with gasoline and those without gasoline were collapsed into one category. Prices were computed to represent the price before sales tax and 2011 prices were adjusted to reflect 2014 dollars based on the consumer price index.

Tests of significance for changes between 2011 and 2014 were conducted on indicators that were tracked consistently over time, including product availability, presence of STAKE ACT signage, exterior tobacco advertising, availability of price promotions, and price of Marlboro and Newport.

Racial/ethnic and socioeconomic disparities: As in 2011, neighborhood was defined as a store-centered buffer. Using ArcGIS (version 10.3), we created ½-mile service areas around each store (i.e., the distance you could walk/drive in any direction from each store using existing roads). These neighborhoods were characterized by 2013 intercensal estimates (Geolytics, Inc.) for percent of residents age 5 to 17 years, percent of African-American residents, percent of Asian/Pacific Islander residents, percent of Hispanic residents, median household income, and population density per square mile, all weighted in proportion to tract area.

Cross-sectional analyses examined neighborhood differences in product availability, promotion and price, using logistic regression for dichotomous outcomes and ordinary least squares regression for continuous outcomes. Neighborhood covariates of interest were included as z-scores to yield meaningful and appropriate coefficient scaling (e.g., change in odds of availability for each standard deviation increase in the proportion of Hispanic residents).

Multilevel modeling was used to examine neighborhood correlates of variation in change (2011 to 2014) for the availability of ENDS and LCCs, availability of cigarette price promotions, presence of exterior cigarette advertising, and price of Marlboro and Newport.

In the multilevel models, observations at each time point were viewed as nested within stores. Thus, the models specified time points and outcome measures at level 1, and store type as well as neighborhood characteristics at level 2. The sole level-1 predictor was time, which was coded 0 for 2011 and 3 for 2014. Therefore, the intercept corresponded to estimated values in 2011, and the coefficient for time estimated annual change between 2011 and 2014 (e.g., estimated annual change in price and odds of availability). Level-2 predictors were store type and neighborhood demographics, which were treated as time invariant and grand mean centered to yield intercepts representing the average across all study neighborhoods in terms of youth, race, ethnicity, income, and population density. Store type was dummy coded, with the most prevalent store type (convenience) as the referent category.

A hierarchical linear model was fit for numeric outcomes (prices), and for binary outcomes a hierarchical generalized linear model (availability of ENDS, LCCs, exterior cigarette advertising, and a cigarette promotion). As the goal of the analysis was to examine neighborhood correlates of change, the slope for time was allowed to randomly vary. Multi-level modeling which was performed using HLM 7.0 and all other analyses were performed using IBM SPSS Statistics 22.

Results

Section 1 summarizes sample attrition from 2011 to 2014. The remaining sections summarize results about product availability (section 2), placement (section 3), promotion (section 4), and price (section 5), including both cross-sectional analyses (2014 only) as well as longitudinal analyses (change since 2011) where appropriate.

Section 1: ATTRITION

Of the 564 stores with valid data in 2011, 112 stores were lost to follow-up for reasons including going out of business, or discontinuing sales of tobacco (see Figure 3). In the longitudinal sample (all stores surveyed in 2011 or 2014, n=691), the distribution of store type was: 47.0 percent chain convenience, 14.3 percent small markets, 14.9 percent liquor stores, 12.2 percent supermarkets, 7.2 percent pharmacies, and 4.3 percent other (including gas kiosks) (see Figure 4).

Figure 3: Longitudinal sample (n=691)
Figure 4 shows that attrition rates varied by store type yielding differing store type distributions by year. In particular, the proportion of sample stores classified as convenience with or without gas increased from 36 percent in 2011 to 51 percent in 2014. This change was primarily due to a change in the definition of convenience store. In 2011, the category convenience was restricted to chain convenience stores while in 2014 the category no longer was restricted to chains. Also noteworthy was the decrease in small markets, from 26 percent in 2011 to 10 percent in 2014.

In 2014, 4.5 percent of stores coded in categories other than pharmacy also had a pharmacy counter inside their store (e.g., a grocery store with a pharmacy). These 24 stores were not included in analyses about pharmacies versus other store types.

Section 2: PRODUCT AVAILABILITY

This section summarizes change in the retail availability of tobacco products since 2011, and describes presence of tobacco products that were not tracked previously. Descriptive data for ENDS includes the availability of types of devices and presence of e-liquids. Availability of flavored tobacco products is also included, summarized by product type and flavor category. Finally, neighborhood characteristics associated with greater availability of ENDS and single LCCs are described.

- In 2014, a wide variety of tobacco products were found in stores that sold cigarettes: In 2014, ENDS were as prevalent in stores as chewing tobacco (66.7 percent and 65.6 percent, respectively) (see Figure 5).
- LCCs were found nearly everywhere that cigarettes were sold (87.7 percent of stores) and large cigars were available in one-third (34.0 percent) of stores (see Figure 5).
- Loose tobacco was sold in 43.0 percent of stores, blunt/cigar wraps in 38.0 percent, and hookah (pipes or shisha tobacco) in only 7.0 percent of stores (see Figure 5).

Flavored products

Menthol cigarettes and flavored varieties of LCCs, chew/snus and ENDS were available in the majority of stores where these products were sold.

- Of all stores that sold cigarettes, 97.4 percent sold menthol cigarettes, and 94.5 percent of stores that sold LCCs sold them in flavored varieties. The proportion of stores that sold ENDS including flavored varieties was 84.2 percent, and the proportion of stores that sold chew or snus including flavor varieties was 83.8 percent (see Figure 6).

Note: Height of bar indicates percent of all stores that sold the product. Blue shading indicates the proportion of stores that sold any mint/menthol, fruit/sweet/candy or alcohol flavors.

- More than half of all stores (56.1 percent) offered a flavored variety of ENDS. Mint was the most common flavor (53.2 percent), followed by fruit/sweet/candy (42.7 percent), and liquor 12.8 percent (see Figure 7).
74.1 percent of stores sold a fruit, candy or other sweet flavored LCC (see Figure 7).

Flavored tobacco products named for alcoholic beverages were prevalent: more than half of stores (53.4 percent) sold at least one liquor-flavored tobacco product, including ENDS (see Figure 7).

Figure 7: Availability of flavor varieties among all stores, by product type (2014, n=579)

There was a five-fold increase in the availability of ENDS from 12 percent in 2011 to 67 percent in 2014 (see Figure 8).

The availability of LCCs increased significantly from 82.7 percent of stores in 2011 to 87.7 percent of stores in 2014.

Between 2011 and 2014 the prevalence of stores that sold snus decreased significantly from 39.4 to 33.5 percent of stores, while the proportion of stores that sold chew remained fairly stable 63.6 to 65.6 percent of stores (see Figure 8).

Figure 8: Change in product availability, 2011-2014

More than half of stores (62.7 percent) sold disposable e-cigarettes and 18.3 percent sold e-liquids (see Figure 9).

A variety of ENDS products were commonly found in liquor stores: Nearly three-quarters (73.3 percent) of liquor stores sold disposable e-cigarettes and almost half (47.7 percent) sold rechargeable e-cigarettes. More than one third of liquor stores sold e-liquids (38.4 percent), e-hookah (36.0 percent), and vape pens, tanks or mods (33.7 percent) (see Table 6).

Figure 9: Percent of stores that sold ENDS, by product category (2014, n=579)

Between 2011 and 2014, the availability of ENDS (including e-liquids) increased in all types of stores that were observed, and ENDS were especially prevalent in convenience and liquor stores (see Figure 10).

Figure 10: Change in ENDS availability by store type, 2011-2014

In 2014, the retail availability of ENDS was significantly greater in neighborhoods with a larger proportion of school-age youth (5-17 years) (OR=1.59, p<0.001), and significantly lower in neighborhoods with a higher proportion of Hispanic residents (OR=0.69, p<0.05), even after adjusting for store type.

E-cigarettes and other ENDS

In 2014, many stores that sold cigarettes also sold e-cigarettes ("cigalikes") or other types of ENDS:
• Between 2011-2014, the odds that a convenience store sold ENDS nearly tripled each year (OR=2.98, \( p<0.001 \)). (See Table 9).

• Between 2011 and 2014, the increase in availability of ENDS was not constant across neighborhoods. As the proportion of school-age youth increased, ENDS availability increased at a faster rate than in stores located in neighborhoods with a lower proportion of youth (see Table 9).

Little cigars/cigarillos (LCCs)
The prevalence of single LCCs suggests that cheap tobacco is readily available:
• More than two-thirds of stores (67.9 percent) sold single LCCs (see Figure 11).
• Less than one percent of stores sold LCCs in a minimum pack size of six or more.

Figure 11: Minimum pack size for LCCs (2014, \( n=579 \))

• Small markets, supermarkets and stores coded as “other” were significantly less likely than convenience stores to sell LCCs \( (p<.02) \), see Table 9.

• Adjusting for store type, single LCCs were likely to be available in neighborhoods with a higher proportion of school-age youth \( (p<.001) \), see Table 9.

Section 3: PLACEMENT
• Few stores displayed tobacco products near kid-friendly items such as candy, gum, mints, toys, soda/slushie machines, and ice cream (see Figure 12).

Figure 12: Tobacco products displayed near kid-friendly items (2014, \( n=579 \))

• More stores displayed ENDS near kid-friendly items and on the front counter than other tobacco products (see Figure 13).

Figure 13: Placement by product category (2014, \( n=579 \))

• At least one tobacco product was displayed on the front counter in 37.7 percent of stores: ENDS in 32.5 percent, LCCs in 9.3 percent, cigarettes in 4.5 percent, and chew/snus in 2.8 percent (see Table 4).

• Half of stores displayed ENDS in the powerwall (on the back counter or wall behind the cash register) (see Figure 13).

• ENDS were rarely displayed near nicotine replacement products for smoking cessation (see Figure 13).

Section 4: PROMOTION
Marketing materials
Marketing materials for tobacco products, including branded advertisements, displays, functional items and shelving units, were found in nearly all stores that sell cigarettes.
• LCCs were the most widely advertised tobacco product after conventional cigarettes, as indicated by the
proportion of stores with at least one advertisement (see Figure 14).

- After cigarettes, ENDS were the most widely advertised product on store exteriors (see Figure 14).

**Figure 14: Percent of stores with any exterior or any marketing materials (2014, n=579)**

- Overall, the percentage of stores with at least one storefront marketing material for cigarettes did not change between 2011 (39.6 percent) and 2014 (40.4 percent) (see Table 9).
- Approximately one-third of stores still feature at least one advertisement for a tobacco product at or below three feet, although the presence of these low-height ads decreased from 36 percent in 2011 to 32.6 percent in 2014, a small difference that was statistically significant (Figure 15).

**Figure 15: Change in presence of low-height ads**

- Cartoon imagery on marketing materials for ENDS was present in only 6 stores (1 percent) (data not shown).

**Price promotions**

- In 2014, nearly half of stores (45.9 percent) advertised a price discount for LCCs, making them the second-most discounted product after cigarettes (see Figure 16).

**Countermarketing**

Compliance with state law improved: The proportion of stores displaying STAKE Act signs increased significantly from 76 percent of stores in 2011 to 91 percent in 2014 (p<.001).

**Section 5: Price of cigarettes and chew (before sales tax)**

As in 2011, the average pack price for cigarettes and chew, as well as the availability of promotions for these products, varied by brand and store type in 2014.

- The average price of cigarettes (before sales tax) ranged from $4.27 for the cheapest pack in the store, to $6.22 for Newport, the most popular premium brand of menthol cigarettes (see Figure 17).
- On average, the cheapest cigarette pack cost $2.39 more than the state and federal excise taxes combined (see Table 12).
- The cheapest pack of cigarettes cost less than the Consumer Price Index market basket prices for a pound either ground beef ($4.62), potato chips ($4.41) or roasted coffee beans ($4.81), and a half gallon of ice cream ($4.60).
Copenhagen cost more Grizzly (see Figure 17), which is consistent with Grizzly’s marketing as a value brand of chewing tobacco (11).

63 percent of stores sold Pall Mall (red, non-menthol) and the average price was $4.95 (SD=0.96). On average, Pall Mall cost $0.84 (SD=0.70) less than Marlboro, p<0.01 (see Table 12).

In 2014, the proportion of prices that were discounted was 14.6 percent for Marlboro, 13.8 percent for Newport, 33.3 percent for Pall Mall, and 30.6 percent for the cheapest pack.

As in 2011, supermarkets were the most expensive store type to buy cigarettes (Marlboro, Newport, Pall Mall, and cheapest pack) (p<.05) (see Table 12).

Small differences between average prices overall mask significant changes by neighborhood demography (see Table 9).

Although overall the price of Marlboro did not change significantly between 2011 and 2014, in communities with higher proportions of school-age youth the price of Marlboro decreased significantly (p<.05).

Neighborhood disparities in prices

In 2014, Newport (menthol) cigarettes cost less in neighborhoods with a higher proportion of African Americans and Asian/Pacific Islanders (p<.05) (see Table 9).

In 2014, all other cigarettes (Marlboro, Pall Mall, and cheapest pack) cost less in neighborhoods with a higher proportion of school-age residents (ages 5-17) (see Table 10).

E-cigarette prices

Unlike cigarette prices, there was little variation in price of e-cigarettes: 79 percent of stores sold Blu for $9.99 and 84 percent of stores sold NJOY for $7.99 (see Figure 19). Because e-cigarette prices were nearly constant, we did not model price as a function of store type and neighborhood demographics.

NJOY cost less than Blu (p<.01), but the average price of flavor varieties of the same brand did not differ (see Figure 19).
Price of little cigars and cigarillos (LCCs)

- Most stores (71.6 percent) sold LCCs for less than $1 and only 15.9 percent of stores charged more than $1.00 for LCCs in any unit size (see Figure 20).

- 35.9 percent of stores sold multiple LCCs for less than $1; 25.7 percent of stores sold single LCCs for less than $1 (see Figure 21).

- LCCs for less than $1 were more prevalent in convenience stores than in pharmacies, small markets, and supermarkets (p<.01) (see Table 12).

- The availability of LCCs for less than $1.00 decreased as neighborhood income increased, even after controlling for store type (p<.001)(see Table 11).

- Neighborhood race/ethnicity was not related to availability of LCCs for less than $1. However, the odds of selling LCCs for less than $1 was greater in neighborhoods with higher proportion of school-age youth (ages 5-17), p=.058 (see Table 11).

Conclusion and recommendations

Two important changes in California’s tobacco retail environment between 2011 and 2014 include a dramatic increase in the availability of ENDS, and a simultaneous increase in the availability of price discounts for combustible cigarettes.

There was a more than five-fold increase the retail availability of ENDS (from 11.5 percent in 2011 to 66.7 percent in 2014), and their availability increased in all types of stores. The odds that a convenience store sold ENDS tripled each year between 2011 and 2014, and the rate of increase was even more dramatic in neighborhoods with a higher proportion of school-age residents (ages 5-17). ENDS were displayed in locations that maximize visibility: Half of stores displayed ENDS in the powerwall, which likely reflects strategic placement of products next to traditional tobacco products sold from the same manufacturer (e.g., Mark Ten e-cigarettes placed near Marlboro cigarettes and Vuse e-cigarettes placed near Camel cigarettes). About one third of stores also displayed ENDS on the front counter, in view of all customers, including youth and non-smokers. It is also
noteworthy that ENDS were more often displayed near kid-friendly items than were any other tobacco products. Because the sampling frame for CTAS excludes vape shops that sell ENDS exclusively, the results of this surveillance underestimate the availability and visibility of ENDS in the retail environment. In the future, comprehensive marketing surveillance of the tobacco retail environment should include vape shops, which have been the subject of much controversy and relatively little research (12).

A downward trend in the availability of price discounts for cigarettes that was observed from 2008 to 2011 was reversed (6). The percentage of stores that advertised price discounts for cigarettes increased from 49.4 percent in 2011 to 67.0 percent in 2014. Greater availability of discounts for cigarettes is also consistent with a deliberate strategy by tobacco companies to promote dual use of combustible products with e-cigarettes by marketing the most harmful products with more attractive prices. By comparison, price discounts for ENDS were advertised in only 4.1 percent of stores. Continued monitoring of advertised discounts for ENDS will help us understand how the introduction of products from the two largest cigarette manufacturers will affect change in price and promotions over time. In addition, monitoring websites and social media for point-of-sale advertising and promotions would help us better understand how tobacco and e-cigarettes are marketed online.

The 2014 CTAS data collection illustrates the widespread availability of cheap tobacco products with flavors that appeal to youth. Most stores (82.9 percent) sold flavored varieties of little cigars or cigarillos (LCCs): fruit, sweet or candy flavors were most common (74.1 percent), and more than half of stores (53.4 percent) sold alcohol-flavored LCCs, such as wine grape, rum, cognac, and honey bourbon. Most stores (71.6 percent) sold LCCs for less than $1, and nearly half of stores (45.9 percent) sold them in packs of two or more at this price. After cigarettes, LCCs were the most widely advertised tobacco products, as indicated by the visibility of one or more advertisements in more than half (56.1 percent) of all stores.

Menthol cigarettes were available nearly everywhere that cigarettes sold, and the majority of stores (60.8 percent) advertised at least one discount for menthols. Newport, the leading brand of menthol cigarettes, cost less in communities with higher proportions of African American and Asian/Pacific Islander residents, and this targeted marketing for menthol cigarettes may exacerbate racial/ethnic disparities in their use.

Regardless of flavor and brand, the cheapest pack of cigarettes cost $4.27 on average, approximately half the price of disposable e-cigarettes. It is cheaper to buy a pack of cigarettes than to buy any number of grocery staples: The least expensive pack of cigarettes cost less than a pound of ground beef, potato chips or coffee, and less than a half-gallon of ice cream.

In the absence of federal regulation of flavored tobacco products, state and local jurisdictions are compelled to be on the cutting edge of policies to regulate the retail environment. Evidenced-based literature supports the following state and local policy recommendations (13-25):

• ban the sale of flavored tobacco products to make these products less attractive to youth;

• include menthol cigarettes in a ban on flavored tobacco products;

• prohibit discounts and coupon redemption for tobacco products;

• increase the minimum unit size of LCCs and establish a higher minimum price for these and other tobacco products.

Other key policy interventions to reduce the availability and visibility of tobacco products, regardless of flavor and price are to:

• promote tobacco-free pharmacies, and otherwise restrict the number, type and location of retailers that can sell tobacco products;

• establish tobacco-free policies on college campuses, including eliminating the sale and marketing of tobacco products on campus;

• establish new or strengthen existing policies to reduce the preponderance of advertising on store windows and doors;

• restrict or eliminate the visible display of tobacco products at the point of sale;
• increase state and local tobacco retailer licensing fees and strengthen the minimum requirements for licensing, and establish such licensing in jurisdictions where no local licensing yet exists.

The variety of tobacco products in the marketplace, including ENDS and accessories, has made retail marketing surveillance and regulation a more complex task. To attain a complete picture of the evolving California retail environment, subsequent iterations of CTAS will need to assess new store types, and metrics will need to be revisited. Surveying retail environments for tobacco products that are not yet licensed, such as vape shops, will require an instrument with modules that are appropriate to different settings and to surveillance methods that demand more clerk interaction. Identifying data needed to support state and local policy priorities will help determine new measures - such as display size, proportion of floor space, value packaging, and price of premium and ultra-low brands from the same manufacturers - to consider adding to future CTAS instruments.

Disclosure: Any views or opinions in this study are solely those of the authors and do not necessarily reflect the policies or official views of the California Department of Public Health (Dec 18, 2015).
7. Nielsen Data, 2014
Appendix A

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Table 1. Neighborhood characteristics, 2014 cross-sectional sample (n=579) and longitudinal (2001 & 2014, n=691)

<table>
<thead>
<tr>
<th>Census based 1/2 mile service area buffer characteristics</th>
<th>Cross-sectional sample (2014, n=579)</th>
<th>Longitudinal sample (2001 &amp; 2014, n=681)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Race, % of population</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>5.7%</td>
<td>8.9</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>11.4%</td>
<td>13.3</td>
</tr>
<tr>
<td>Other</td>
<td>18.6%</td>
<td>12.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>38.3%</td>
<td>25.2</td>
</tr>
<tr>
<td>School age youth, 5 to 17 yrs</td>
<td>17.5%</td>
<td>5.3</td>
</tr>
<tr>
<td>Median Household income</td>
<td>$60,434</td>
<td>23,469</td>
</tr>
<tr>
<td>Population density</td>
<td>7,592</td>
<td>8,562</td>
</tr>
</tbody>
</table>

Table 2: Change in product availability (2011-2014)

<table>
<thead>
<tr>
<th>Product Availability</th>
<th>2011 n=565</th>
<th>2014 n=579</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCC</td>
<td>82.7%</td>
<td>87.7%</td>
</tr>
<tr>
<td>Chew</td>
<td>63.6%</td>
<td>65.6%</td>
</tr>
<tr>
<td>Snus</td>
<td>39.4%</td>
<td>33.5%</td>
</tr>
<tr>
<td>ENDS</td>
<td>11.5%</td>
<td>66.7%</td>
</tr>
</tbody>
</table>

Table 3: Sample composition (2011 & 2014, n=565 & n=579)

<table>
<thead>
<tr>
<th>Store type</th>
<th>2011</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Convenience</td>
<td>36.0</td>
<td>51.1</td>
</tr>
<tr>
<td>Liquor</td>
<td>13.4</td>
<td>14.9</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>8.5</td>
<td>7.3</td>
</tr>
<tr>
<td>Small Market</td>
<td>26.1</td>
<td>10.4</td>
</tr>
<tr>
<td>Supermarket</td>
<td>13.4</td>
<td>11.9</td>
</tr>
<tr>
<td>Other</td>
<td>2.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 4: Product availability and location by store type (2014, n=579)

| Store type        | n   | %   | %   | %   | %   | %   | %   | %   | %   | %   | %   | %   | %   | %   | %   | %   | %   | Any of these four products |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------------------|
| Convenience store| 296 | 76.4 | 48.6 | 93.2 | 43.6 | 27.4 | 43.2 | 3.4 | 77.0 | 2.4 | 2.0 | 7.8 | 40.2 | 43.6 |
| Liquor store      | 86  | 73.3 | 32.6 | 95.3 | 53.5 | 58.1 | 53.5 | 18.6 | 77.9 | 7.0 | 3.5 | 17.4 | 48.8 | 54.7 |
| Pharmacy          | 42  | 52.4 | 2.4  | 92.9 | 57.1 | 61.9 | 35.7 | 9.5  | 52.4 | 0.0 | 0.0 | 0.0  | 2.4  | 2.4  |
| Small market      | 60  | 40.0 | 16.7 | 71.7 | 28.3 | 18.3 | 30.0 | 1.7  | 43.3 | 6.7 | 3.3 | 15.0 | 25.0 | 33.3 |
| Supermarket       | 69  | 44.9 | 5.8  | 69.6 | 31.9 | 24.6 | 5.8  | 0.0  | 44.9 | 8.7 | 4.3 | 5.8  | 4.3  | 13.0 |
| Other             | 26  | 53.8 | 26.9 | 76.9 | 42.3 | 42.3 | 42.3 | 30.8 | 46.2 | 11.5| 7.7 | 11.5 | 30.8 | 46.2 |
| Total             | 579 | 65.6 | 33.5 | 87.7 | 43.0 | 33.9 | 38.3 | 6.7  | 66.7 | 4.5 | 2.8 | 9.3  | 32.5 | 37.7 |

Table 5: ENDS availability by store type, (2011 & 2014, n=565 & n=579)

<table>
<thead>
<tr>
<th>Store type</th>
<th>2011 n=565</th>
<th>2014 n=579</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Convenience</td>
<td>15.7</td>
<td>77.0</td>
</tr>
<tr>
<td>Liquor</td>
<td>17.1</td>
<td>77.9</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>16.7</td>
<td>52.4</td>
</tr>
<tr>
<td>Small Market</td>
<td>5.4</td>
<td>43.3</td>
</tr>
<tr>
<td>Supermarket</td>
<td>3.9</td>
<td>44.9</td>
</tr>
<tr>
<td>Other</td>
<td>7.1</td>
<td>46.2</td>
</tr>
<tr>
<td>Total</td>
<td>11.5</td>
<td>66.7</td>
</tr>
</tbody>
</table>

Table 6: Percent of stores that sold ENDS, by device and store type (2014, n=579)

| Store type         | n   | Disposable cigarette look-a-likes | %   | | Rechargeable/refillable cigarette look-a-likes | %   | | Vape pens/tanks/mods | %   | | E-Hookah | %   | | E-Cigars | %   | | E-Liquid | %   |
|-------------------|-----|----------------------------------|-----| |----------------------------------|-----| |----------------------------------|-----| |------------------|-----| |-------------------|-----| |-------------------|-----|
| Convenience store | 296 | 73.3                             | 53.0 | | 23.6                             | 16.9 | | 16.6                             | 17.6 | | 34.6                             | 38.4 | | 11.5                             | 13.3 | |
| Liquor store      | 86  | 73.3                             | 47.7 | | 33.7                             | 36.0 | | 17.4                             | 7.1  | | 16.7                             | 13.3 | | 14.6                             | 1.4  | |
| Pharmacy          | 42  | 38.3                             | 28.3 | | 13.3                             | 16.7 | | 6.7                              | 13.3 | | 34.6                             | 34.6 | | 17.4                             | 18.3 | |
| Small market      | 60  | 37.7                             | 30.4 | | 1.4                              | 0.0  | | 2.9                              | 1.4  | | 30.8                             | 26.9 | | 15.0                             | 18.3 | |
| Supermarket       | 69  | 46.2                             | 34.6 | | 34.6                             | 30.8 | | 26.9                             | 34.6 | | 34.6                             | 34.6 | | 15.0                             | 18.3 | |
| Other             | 26  | 62.7                             | 45.6 | | 20.9                             | 17.4 | | 15.0                             | 18.3 | |
| Total             | 579 | 62.7                             | 45.6 | | 20.9                             | 17.4 | | 15.0                             | 18.3 | |

Table 7: Availability of flavored product by product type, flavor variety and store type (2014, n=579)

| Store type         | n   | Cigarettes | Menthol | %   | | Chew/snus | Fruit/sweet/candy | %   | | | | Any Flavor | %   | | LCCs | Fruit/sweet/candy | %   | | | | Any Flavor | %   | | ENDS | Fruit/sweet/candy | %   | | | | Any Flavor | %   |
|-------------------|-----|------------|---------|-----| | | | | | | | | | | | | | | |
| Convenience store | 296 | 99.0 | 68.2 | 28.7 | | 3.0 | 74.0 | | | | | | | | | | | | |
| Liquor store      | 86  | 100.0 | 57.0 | 26.7 | | 8.1 | 69.8 | | | | | | | | | | | | |
| Pharmacy          | 42  | 100.0 | 16.7 | 4.8  | | 0.0 | 31.0 | | | | | | | | | | | | |
| Small market      | 60  | 93.3 | 33.3 | 5.0  | | 1.7 | 40.0 | | | | | | | | | | | | |
| Supermarket       | 69  | 94.2 | 30.4 | 8.7  | | 1.4 | 36.2 | | | | | | | | | | | | |
| Other             | 26  | 84.6 | 50.0 | 30.8 | | 11.5 | 57.7 | | | | | | | | | | | | |
| Total             | 579 | 97.4 | 53.9 | 21.9 | | 3.6 | 61.5 | | | | | | | | | | | | |
### Table 8: Percent of stores that displayed image advertising, by product and store type (2014, n=579)

<table>
<thead>
<tr>
<th>Store type</th>
<th>n</th>
<th>Cigarettes</th>
<th>Chew/Snus</th>
<th>LCCs</th>
<th>Any: Cigarettes, LCCs, or Chew/Snus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience store</td>
<td>296</td>
<td>36.1</td>
<td>21.6</td>
<td>20.6</td>
<td>43.2</td>
</tr>
<tr>
<td>Liquor store</td>
<td>86</td>
<td>23.3</td>
<td>18.6</td>
<td>23.3</td>
<td>32.6</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>42</td>
<td>26.2</td>
<td>0.0</td>
<td>11.9</td>
<td>28.6</td>
</tr>
<tr>
<td>Small market</td>
<td>60</td>
<td>20.0</td>
<td>11.7</td>
<td>16.7</td>
<td>25.0</td>
</tr>
<tr>
<td>Supermarket</td>
<td>69</td>
<td>18.8</td>
<td>4.3</td>
<td>8.7</td>
<td>26.1</td>
</tr>
<tr>
<td>Other</td>
<td>26</td>
<td>19.2</td>
<td>11.5</td>
<td>7.7</td>
<td>23.1</td>
</tr>
<tr>
<td>Total</td>
<td>579</td>
<td>29.0</td>
<td>16.1</td>
<td>18.0</td>
<td>35.8</td>
</tr>
</tbody>
</table>

### Table 9: Change over time in cigarette price, LCC and ENDS product availability, presence of an exterior cigarette ad, and presence of at least one interior cigarette price promotion by neighborhood characteristics (2011, n=565 & 2014, n=579)

#### Bivariate models: Annual change

<table>
<thead>
<tr>
<th>In-store observations (Level 1) n</th>
<th>Single pack price (no sales tax)</th>
<th>Product Availability</th>
<th>Cigarette Marketing Interior Promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Marlboro</td>
<td>Newport</td>
<td>LCCs</td>
</tr>
<tr>
<td>Stores/Neighborhoods (Level 2) n</td>
<td>658</td>
<td>602</td>
<td>691</td>
</tr>
</tbody>
</table>

#### Adjusted models: Annual change as a function neighborhood characteristics controlling for store type

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquor store</td>
<td>0.06</td>
<td>0.012</td>
<td>0.09</td>
<td>&lt;0.001</td>
<td>1.15</td>
<td>0.99</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>0.01</td>
<td>0.681</td>
<td>-0.02</td>
<td>0.718</td>
<td>0.95</td>
<td>0.80</td>
</tr>
<tr>
<td>Small Market</td>
<td>0.05</td>
<td>0.040</td>
<td>0.07</td>
<td>0.042</td>
<td>0.57</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Supermarket</td>
<td>0.15</td>
<td>&lt;0.001</td>
<td>0.27</td>
<td>&lt;0.001</td>
<td>0.53</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Other</td>
<td>0.00</td>
<td>0.910</td>
<td>-0.08</td>
<td>0.149</td>
<td>0.66</td>
<td>0.026</td>
</tr>
<tr>
<td>Number of data collections</td>
<td>-0.04</td>
<td>0.128</td>
<td>-0.01</td>
<td>0.788</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>-0.03</td>
<td>&lt;0.001</td>
<td>-0.02</td>
<td>0.005</td>
<td>1.15</td>
<td>0.232</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>-0.01</td>
<td>0.039</td>
<td>-0.03</td>
<td>&lt;0.001</td>
<td>0.98</td>
<td>0.008</td>
</tr>
<tr>
<td>Other race</td>
<td>0.03</td>
<td>0.246</td>
<td>0.03</td>
<td>0.238</td>
<td>1.25</td>
<td>0.039</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>-0.04</td>
<td>0.082</td>
<td>-0.05</td>
<td>0.093</td>
<td>0.70</td>
<td>0.001</td>
</tr>
<tr>
<td>School age (5 to 17)</td>
<td>-0.02</td>
<td>0.046</td>
<td>-0.02</td>
<td>0.147</td>
<td>1.14</td>
<td>0.015</td>
</tr>
<tr>
<td>Household Income</td>
<td>0.01</td>
<td>0.557</td>
<td>0.01</td>
<td>0.342</td>
<td>0.94</td>
<td>0.289</td>
</tr>
<tr>
<td>Pop. Density (sq. mile)</td>
<td>0.01</td>
<td>0.020</td>
<td>0.01</td>
<td>0.168</td>
<td>0.94</td>
<td>0.080</td>
</tr>
</tbody>
</table>
Table 10: Models of price of cigarette and chew products by neighborhood characteristics (2014)

<table>
<thead>
<tr>
<th></th>
<th>Marlboro</th>
<th>Newport</th>
<th>Pall Mall</th>
<th>Cheapest Pack</th>
<th>Grizzly</th>
<th>Copenhagen</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 509</td>
<td>n = 418</td>
<td>n = 355</td>
<td>n = 462</td>
<td>n = 254</td>
<td>n = 226</td>
</tr>
<tr>
<td>Intercept</td>
<td>5.71</td>
<td>6.05</td>
<td>4.70</td>
<td>4.27</td>
<td>3.50</td>
<td>4.80</td>
</tr>
<tr>
<td>p-value</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Store Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquor store</td>
<td>0.06</td>
<td>0.22</td>
<td>0.34</td>
<td>-0.20</td>
<td>0.10</td>
<td>-0.08</td>
</tr>
<tr>
<td>p-value</td>
<td>0.51</td>
<td>0.04</td>
<td>0.01</td>
<td>0.13</td>
<td>0.32</td>
<td>0.71</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>-0.35</td>
<td>-0.28</td>
<td>-0.27</td>
<td>-0.69</td>
<td>-0.22</td>
<td>-0.18</td>
</tr>
<tr>
<td>p-value</td>
<td>0.00</td>
<td>0.06</td>
<td>0.07</td>
<td>0.00</td>
<td>0.19</td>
<td>0.63</td>
</tr>
<tr>
<td>Small Market</td>
<td>0.18</td>
<td>0.06</td>
<td>0.24</td>
<td>0.04</td>
<td>-0.19</td>
<td>-0.61</td>
</tr>
<tr>
<td>p-value</td>
<td>0.08</td>
<td>0.64</td>
<td>0.14</td>
<td>0.80</td>
<td>0.18</td>
<td>0.03</td>
</tr>
<tr>
<td>Supermarket</td>
<td>0.79</td>
<td>1.17</td>
<td>1.75</td>
<td>0.51</td>
<td>0.16</td>
<td>-0.05</td>
</tr>
<tr>
<td>p-value</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.26</td>
<td>0.87</td>
</tr>
<tr>
<td>Other</td>
<td>-0.02</td>
<td>-0.26</td>
<td>0.00</td>
<td>0.11</td>
<td>0.28</td>
<td>-0.20</td>
</tr>
<tr>
<td>p-value</td>
<td>0.88</td>
<td>0.19</td>
<td>0.99</td>
<td>0.59</td>
<td>0.19</td>
<td>0.57</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>-0.05</td>
<td>-0.08</td>
<td>0.02</td>
<td>-0.05</td>
<td>0.05</td>
<td>-0.07</td>
</tr>
<tr>
<td>p-value</td>
<td>0.17</td>
<td>0.02</td>
<td>0.69</td>
<td>0.28</td>
<td>0.22</td>
<td>0.58</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>-0.05</td>
<td>-0.14</td>
<td>0.00</td>
<td>-0.07</td>
<td>-0.04</td>
<td>-0.31</td>
</tr>
<tr>
<td>p-value</td>
<td>0.12</td>
<td>0.00</td>
<td>0.73</td>
<td>0.13</td>
<td>0.35</td>
<td>0.00</td>
</tr>
<tr>
<td>Other race</td>
<td>-0.06</td>
<td>0.02</td>
<td>-0.07</td>
<td>-0.01</td>
<td>0.06</td>
<td>-0.15</td>
</tr>
<tr>
<td>p-value</td>
<td>0.26</td>
<td>0.80</td>
<td>0.35</td>
<td>0.90</td>
<td>0.35</td>
<td>0.22</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>-0.02</td>
<td>-0.08</td>
<td>0.07</td>
<td>0.09</td>
<td>0.13</td>
<td>0.16</td>
</tr>
<tr>
<td>p-value</td>
<td>0.75</td>
<td>0.32</td>
<td>0.37</td>
<td>0.28</td>
<td>0.05</td>
<td>0.25</td>
</tr>
<tr>
<td>School age (5 to 17)</td>
<td>-0.10</td>
<td>0.07</td>
<td>0.14</td>
<td>-0.21</td>
<td>-0.09</td>
<td>-0.12</td>
</tr>
<tr>
<td>p-value</td>
<td>0.02</td>
<td>0.19</td>
<td>0.02</td>
<td>0.00</td>
<td>0.06</td>
<td>0.25</td>
</tr>
<tr>
<td>Household Income</td>
<td>0.04</td>
<td>0.07</td>
<td>0.05</td>
<td>0.13</td>
<td>0.06</td>
<td>0.01</td>
</tr>
<tr>
<td>p-value</td>
<td>0.29</td>
<td>0.12</td>
<td>0.34</td>
<td>0.01</td>
<td>0.10</td>
<td>0.92</td>
</tr>
<tr>
<td>Pop. Density (sq. mile)</td>
<td>0.06</td>
<td>0.06</td>
<td>0.02</td>
<td>0.13</td>
<td>0.03</td>
<td>0.46</td>
</tr>
<tr>
<td>p-value</td>
<td>0.11</td>
<td>0.17</td>
<td>0.72</td>
<td>0.01</td>
<td>0.46</td>
<td>0.71</td>
</tr>
</tbody>
</table>

Table 11: Models of cheap LCCs, product and price promotion availability by neighborhood characteristics 2014 (n=579)

<table>
<thead>
<tr>
<th></th>
<th>Product availability</th>
<th>Price promotion (interior or exterior)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LCCs for less than $1.00</td>
<td>ENDs</td>
</tr>
<tr>
<td>n=506</td>
<td>n=579</td>
<td>n=579</td>
</tr>
<tr>
<td>Intercep</td>
<td>9.87</td>
<td>3.57</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Store Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquor store</td>
<td>0.72</td>
<td>1.11</td>
</tr>
<tr>
<td>p-value</td>
<td>0.402</td>
<td>0.730</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>0.16</td>
<td>0.27</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Small Market</td>
<td>0.30</td>
<td>0.24</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Supermarket</td>
<td>0.13</td>
<td>0.19</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Other</td>
<td>1.11</td>
<td>0.25</td>
</tr>
<tr>
<td>p-value</td>
<td>0.895</td>
<td>0.001</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>0.97</td>
<td>0.92</td>
</tr>
<tr>
<td>p-value</td>
<td>0.796</td>
<td>0.368</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>1.10</td>
<td>0.86</td>
</tr>
<tr>
<td>p-value</td>
<td>0.554</td>
<td>0.168</td>
</tr>
<tr>
<td>Other race</td>
<td>0.87</td>
<td>0.82</td>
</tr>
<tr>
<td>p-value</td>
<td>0.547</td>
<td>0.193</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.13</td>
<td>0.69</td>
</tr>
<tr>
<td>p-value</td>
<td>0.674</td>
<td>0.048</td>
</tr>
<tr>
<td>School age (5 to 17)</td>
<td>1.41</td>
<td>1.59</td>
</tr>
<tr>
<td>p-value</td>
<td>0.058</td>
<td>0.001</td>
</tr>
<tr>
<td>Household Income</td>
<td>0.60</td>
<td>0.92</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.001</td>
<td>0.462</td>
</tr>
<tr>
<td>Pop. Density (sq. mile)</td>
<td>0.80</td>
<td>1.01</td>
</tr>
<tr>
<td>p-value</td>
<td>0.132</td>
<td>0.907</td>
</tr>
</tbody>
</table>
### Table 12: Single-pack price for cigarettes, chew and ENDS (excluding sales tax) by store type (2014)

<table>
<thead>
<tr>
<th>Store Type</th>
<th>Marlboro Mean (SD)</th>
<th>Marlboro SD</th>
<th>Newport Mean (SD)</th>
<th>Newport SD</th>
<th>Pall Mall Mean (SD)</th>
<th>Pall Mall SD</th>
<th>Cheapest pack Mean (SD)</th>
<th>Cheapest pack SD</th>
<th>Total Mean (SD)</th>
<th>Total SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience store</td>
<td>5.71 (0.68)</td>
<td>6.05 (0.71)</td>
<td>4.68 (0.64)</td>
<td>4.27 (0.85)</td>
<td>3.47 (0.50)</td>
<td>4.86 (0.94)</td>
<td>10.21 (1.06)</td>
<td>7.98 (0.43)</td>
<td>10.24 (0.90)</td>
<td>7.94 (0.66)</td>
</tr>
<tr>
<td>Liquor store</td>
<td>5.76 (0.68)</td>
<td>6.25 (0.72)</td>
<td>5.03 (0.86)</td>
<td>4.08 (0.76)</td>
<td>3.54 (0.57)</td>
<td>4.71 (0.88)</td>
<td>10.56 (1.22)</td>
<td>7.84 (1.41)</td>
<td>10.24 (0.90)</td>
<td>7.94 (0.66)</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>5.38 (0.50)</td>
<td>5.79 (0.88)</td>
<td>4.43 (0.75)</td>
<td>3.57 (0.80)</td>
<td>3.24 (0.74)</td>
<td>4.61 (1.41)</td>
<td>10.14 (0.38)</td>
<td>7.66 (1.00)</td>
<td>10.24 (0.90)</td>
<td>7.94 (0.66)</td>
</tr>
<tr>
<td>Small market</td>
<td>5.91 (0.62)</td>
<td>6.10 (0.63)</td>
<td>4.92 (0.76)</td>
<td>4.33 (1.24)</td>
<td>3.25 (0.39)</td>
<td>4.24 (1.27)</td>
<td>9.82 (0.48)</td>
<td>7.84 (0.28)</td>
<td>10.24 (0.90)</td>
<td>7.94 (0.66)</td>
</tr>
<tr>
<td>Supermarket</td>
<td>6.51 (0.92)</td>
<td>7.26 (1.02)</td>
<td>6.42 (1.09)</td>
<td>4.77 (1.05)</td>
<td>3.58 (0.47)</td>
<td>4.84 (1.02)</td>
<td>9.99 (0.00)</td>
<td>7.98 (0.05)</td>
<td>10.24 (0.90)</td>
<td>7.94 (0.66)</td>
</tr>
<tr>
<td>Other</td>
<td>5.72 (0.50)</td>
<td>5.81 (0.80)</td>
<td>4.72 (0.72)</td>
<td>4.45 (1.13)</td>
<td>3.64 (0.27)</td>
<td>4.84 (0.78)</td>
<td>10.16 (0.41)</td>
<td>8.13 (0.38)</td>
<td>10.24 (0.90)</td>
<td>7.94 (0.66)</td>
</tr>
<tr>
<td>Total</td>
<td>5.82 (0.75)</td>
<td>6.22 (0.88)</td>
<td>4.95 (0.96)</td>
<td>4.27 (0.96)</td>
<td>3.46 (0.51)</td>
<td>4.80 (1.01)</td>
<td>10.22 (0.86)</td>
<td>8.13 (0.38)</td>
<td>10.24 (0.90)</td>
<td>7.94 (0.66)</td>
</tr>
</tbody>
</table>

Note: The combined federal ($1.01) and state ($0.87 cigarette tax is $1.88.

### Table 13: Percent of stores with any marketing materials by product and location (2014, n=579)

<table>
<thead>
<tr>
<th>Marketing material</th>
<th>Cigarettes</th>
<th>Chew/Snus</th>
<th>LCC</th>
<th>Blu</th>
<th>NJOY</th>
<th>Other ENDS</th>
<th>ENDS</th>
<th>Any (cigarettes, chew/snus, LCCs, ENDS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior</td>
<td>83.1</td>
<td>39.0</td>
<td>53.5</td>
<td>24.5</td>
<td>13.6</td>
<td>34.5</td>
<td>39.4</td>
<td>87.7</td>
</tr>
<tr>
<td>Exterior</td>
<td>40.8</td>
<td>11.4</td>
<td>10.7</td>
<td>11.5</td>
<td>6.7</td>
<td>20.7</td>
<td>29.9</td>
<td>49.4</td>
</tr>
<tr>
<td>Interior &amp;/or Exterior</td>
<td>84.3</td>
<td>40.8</td>
<td>56.1</td>
<td>28.2</td>
<td>17.4</td>
<td>39.4</td>
<td>46.8</td>
<td>88.8</td>
</tr>
</tbody>
</table>

### Table 14: Percent of stores with any exterior marketing materials, by product and store type (2014, n=579)

<table>
<thead>
<tr>
<th></th>
<th>Cigarettes</th>
<th>Chew/Snus</th>
<th>LCC</th>
<th>ENDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience store</td>
<td>55.1</td>
<td>17.2</td>
<td>12.5</td>
<td>42.6</td>
</tr>
<tr>
<td>Liquor store</td>
<td>45.3</td>
<td>10.5</td>
<td>10.5</td>
<td>33.7</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>2.4</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Small market</td>
<td>30.0</td>
<td>3.3</td>
<td>8.3</td>
<td>21.7</td>
</tr>
<tr>
<td>Supermarket</td>
<td>2.9</td>
<td>2.9</td>
<td>2.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Other</td>
<td>50.0</td>
<td>7.7</td>
<td>34.6</td>
<td>19.2</td>
</tr>
<tr>
<td>Total</td>
<td>40.8</td>
<td>11.4</td>
<td>10.7</td>
<td>29.9</td>
</tr>
</tbody>
</table>

### Table 15: Percentage of stores with at least one price promotion by product (2014, n=579)

<table>
<thead>
<tr>
<th>Price promotion</th>
<th>Cigarettes</th>
<th>Chew/Snus</th>
<th>LCC</th>
<th>Any (cigarettes, chew/snus, LCCs)</th>
<th>Blu</th>
<th>NJOY</th>
<th>Other ENDS</th>
<th>Any ENDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior (material or on pack)</td>
<td>65.8</td>
<td>28.2</td>
<td>45.9</td>
<td>71.5</td>
<td>0.3</td>
<td>1.7</td>
<td>2.4</td>
<td>4.1</td>
</tr>
<tr>
<td>Interior marketing material</td>
<td>64.6</td>
<td>27.6</td>
<td>45.3</td>
<td>57.2</td>
<td>0.3</td>
<td>1.7</td>
<td>2.4</td>
<td>4.1</td>
</tr>
<tr>
<td>Interior on pack</td>
<td>46.3</td>
<td>16.6</td>
<td>36.6</td>
<td>72.5</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Exterior marketing material</td>
<td>19.5</td>
<td>4.1</td>
<td>1.6</td>
<td>20.7</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Interior or Exterior</td>
<td>67.0</td>
<td>28.3</td>
<td>45.9</td>
<td>73.4</td>
<td>0.3</td>
<td>1.7</td>
<td>2.4</td>
<td>4.1</td>
</tr>
</tbody>
</table>
Table 16: Reliability analysis summary for select variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Reliability Statistic</th>
<th>n</th>
<th>Kappa</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Availability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigarettes - menthol</td>
<td></td>
<td>44</td>
<td>0.48</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>LCCs - unflavored</td>
<td></td>
<td>44</td>
<td>0.92</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>LCCs - flavored</td>
<td></td>
<td>44</td>
<td>0.63</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Chew/Snus - unflavored</td>
<td></td>
<td>44</td>
<td>0.72</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Chew/Snus - flavored</td>
<td></td>
<td>44</td>
<td>0.86</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>ENDS</td>
<td></td>
<td>42</td>
<td>0.80</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Price</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marlboro</td>
<td></td>
<td>32</td>
<td>0.88</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Newport (menthol)</td>
<td></td>
<td>22</td>
<td>0.49</td>
<td>0.071</td>
</tr>
<tr>
<td>Pall Mall</td>
<td></td>
<td>22</td>
<td>0.87</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Cheapest</td>
<td></td>
<td>28</td>
<td>0.94</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Grizzly</td>
<td></td>
<td>12</td>
<td>0.82</td>
<td>0.004</td>
</tr>
<tr>
<td>Copenhagen</td>
<td></td>
<td>13</td>
<td>0.97</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td>9</td>
<td>0.82</td>
<td>0.012</td>
</tr>
<tr>
<td>Blu (classic tobacco)</td>
<td></td>
<td>17</td>
<td>0.88</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>NJOY( traditional bold)</td>
<td></td>
<td>8</td>
<td>0.84</td>
<td>0.014</td>
</tr>
<tr>
<td><strong>Store Type</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCCs sold as singles</td>
<td></td>
<td>42</td>
<td>0.60</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>LCCs &lt; $1.00</td>
<td></td>
<td>42</td>
<td>0.48</td>
<td>0.002</td>
</tr>
<tr>
<td><strong>Store Type</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENDS</td>
<td></td>
<td>44</td>
<td>0.68</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Notes:
- n = number of stores included in analysis
- Kappa = Cohen's Kappa, computed for dichotomous variables
- ICC = Intraclass correlation coefficient
- Time span between first and second visit from 0 to 12 days (mean = 4.6, SD=3.5)
Figures

1. Location of longitudinal sample (2014, n=579)

Figure 2. CTAS ENDS classifications
Figure 3: Longitudinal sample (n=691)

- 2011 only (n=112)
- Both 2011 & 2014 (n=454)
- 2014 only (n=125)

Figure 4: Sample composition (2011 & 2014, n=565 & n=579)

- Convenience store: 51.1% (2011), 36.0% (2014)
- Pharmacy: 7.3% (2011), 8.5% (2014)
- Small market: 26.1% (2011), 11.9% (2014)
- Supermarket: 4.5% (2011), 2.5% (2014)
- Other: 13.4% (2011), 13.4% (2014)
Figure 5: Product availability (2014, n=579)

Figure 6: Availability of flavored product variety (2014, n=579)
Figure 7: Availability of flavored tobacco among stores that sell, by product type

Note: Height of bar illustrates % of all stores that sold the product. Blue shading indicates the proportion of stores selling any flavor variety.

Figure 8: Change in product availability, 2011-2014
Figure 9: Percent of stores that sold ENDS, by product category (2014, n=579)

Figure 10: Change in ENDS availability by store type, 2011-2014
Figure 11: Minimum pack size for LCCs (2014, n=579)

Figure 12: Tobacco products near kid-friendly items (2014, n=579)
Figure 13: ENDS product placement (2014, n=579)

Figure 14: Percent of stores with any exterior or any marketing materials (2014, n=579)
Figure 15: Change in presence of low-height ads

Figure 16: Change in availability of price discount by product
Figure 17: Single-pack price for cigarettes and chew in 2014

Figure 18: Change in single-pack price in 2014 dollars, by brand and year
Figure 19: Median price of disposable e-cigs, by brand and flavor (2014)

Figure 20: Availability of LCCs for less than $1 (2014, n=579)
Figure 21: Largest quantity of LCCs for less than $1 (2014, n=579)
# California Tobacco Advertising Study
## 2014
### Final Survey

Developed by the Stanford Prevention Research Center for the California Tobacco Control Program, California Department of Public Health

Welcome to the California Tobacco Advertising Study

## Section 1: Basic Store Information

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Store ID (3 digit ID): __ __ __</td>
</tr>
<tr>
<td>2</td>
<td>Coder ID (2-character ID): __ __</td>
</tr>
</tbody>
</table>
| 3 | Store name: Does the actual store name match the assigned store name?  
  - Yes  
  - No – Enter correct name:____ |
| 4 | Store address: Does the actual store address match the assigned address?  
  - Yes  
  - No – Enter correct address____ |
| 5 | Can you survey this store?  
  - Yes, I can  
  - No, store does not exist  
  - No, store is closed  
  - No, membership or fee required to enter  
  - No, environment unsafe for me  
  - No, asked to leave before completing the survey  
  - No, other - specify:____ [TERMINATE] |
| 6 | Are any cigarettes sold here?  
  - Yes and visible to customers.  
  - Yes and NOT visible to customers.  
  - No cigarettes sold here [TERMINATE] |

**Convenience (with or without gas):** A store that sells convenience items such as snacks, beverages and often gas. Does not sell uncooked meat.  
**Gas Only (Gas kiosk):** A gas station that does not have an attached store/convenience area that you can enter.  
**Liquor store:** A store that sells mostly alcohol, it may also sell snacks and other types of drinks (e.g., soda or water).  
**Pharmacy:** A store that sells drugs and medicines and may also sell other items. It may be a chain such as Rite Aid or a smaller, independently owned store.  
**Small Market / deli / produce market:** These stores have fewer than three cash registers; may sell alcohol, but it is not its main product. Small markets sell uncooked meat.  
**Supermarket/large grocery store:** A large store that sells food and other items, such as Safeway or Vons. This will have 3 or more cash registers.  
**Tobacco shop:** A store primarily engaged in the sales of tobacco products but may also sell snacks and alcohol.  
**Other:** Any store that does not fall into any of the above categories (e.g., Walmart, BJ’s, Dollar General, Family Dollar, vape lounges & emporiums, hookah bars, donut shop/bait and tackle). Please include a brief description of store type in the box.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 7 | What type of store is this?  
  - Convenience store (With or without gas)  
  - Gas only (Gas kiosk)  
  - Liquor store  
  - Pharmacy (Walgreens, etc.) [Skip pharmacy question]  
  - Small market/deli/produce market  
  - Supermarket/large grocery store  
  - Tobacco shop  
  - Other |
| 8 | Does the store have a pharmacy counter? (yes/no)  
  - Yes  
  - No |
### Section 2. Product Availability, Placement and Promotions

<table>
<thead>
<tr>
<th>11</th>
<th>Select all products available and describe product placement (code separately for flavored):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sold</td>
</tr>
<tr>
<td>----</td>
<td>------</td>
</tr>
<tr>
<td></td>
<td>☐</td>
</tr>
<tr>
<td>Cigarettes, unflavored</td>
<td></td>
</tr>
<tr>
<td>Cigarettes, menthol</td>
<td>☐</td>
</tr>
<tr>
<td>Cigarillos/little cigars, unflavored</td>
<td>☐</td>
</tr>
<tr>
<td>Cigarillos/little cigars, flavored</td>
<td>☐</td>
</tr>
<tr>
<td>Chewing tobacco, unflavored</td>
<td>☐</td>
</tr>
<tr>
<td>Chewing tobacco, flavored</td>
<td>☐</td>
</tr>
<tr>
<td>Snus, unflavored</td>
<td>☐</td>
</tr>
<tr>
<td>Snus, flavored</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Near kid-stuff:** Within 12-inches of sodas fountains, ice cream, slushy machines, candy, gum, toys

<table>
<thead>
<tr>
<th>12</th>
<th>Other tobacco product availability: (Select all)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐ Loose or pipe tobacco</td>
</tr>
<tr>
<td></td>
<td>☐ Large cigars</td>
</tr>
<tr>
<td></td>
<td>☐ Blunt/cigar wraps</td>
</tr>
<tr>
<td></td>
<td>☐ Hookah (Shisha/tobacco or hookah pipe)</td>
</tr>
<tr>
<td></td>
<td>☐ None of the above</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13</th>
<th>Are there any other tobacco products being sold? If yes, please describe all</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐ No</td>
</tr>
<tr>
<td></td>
<td>☐ Yes,(Product names &amp; brands): __________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14</th>
<th>What flavors are available for these products? (Select all):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mint</td>
</tr>
<tr>
<td>Little cigars/cigarillos</td>
<td>☐</td>
</tr>
<tr>
<td>Chewing tobacco/Snus</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15</th>
<th>Smallest unit size of cigarillos/little cigars available? (Select one)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐ One (sold as single)</td>
</tr>
<tr>
<td></td>
<td>☐ Packs of 2-5</td>
</tr>
<tr>
<td></td>
<td>☐ Packs of 6-19</td>
</tr>
<tr>
<td></td>
<td>☐ Packs of 20 or more</td>
</tr>
<tr>
<td></td>
<td>☐ No cigarillos/little cigars sold</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16</th>
<th>Cigarettes: Are there more than 100 cigarette pack facings on display?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐ Yes, more than 100 pack facings</td>
</tr>
<tr>
<td></td>
<td>☐ No, fewer than 100 pack facings</td>
</tr>
<tr>
<td></td>
<td>☐ No, all packs are end stacked (no front facing packs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17</th>
<th>What percent of merchandising space behind the main checkout counter contains openly visible tobacco products?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐ Less than 5%</td>
</tr>
<tr>
<td></td>
<td>☐ 5% - 49%</td>
</tr>
<tr>
<td></td>
<td>☐ 50% - 75%</td>
</tr>
<tr>
<td></td>
<td>☐ More than 75%</td>
</tr>
</tbody>
</table>
Select Less than 5% if only 5% of the merchandise space is devoted to tobacco products (a token amount). Select 5-49% if a noticeable amount but less than half of the available space is devoted to tobacco products. Select 50-75% if a substantial amount of space is devoted to tobacco products, occupying a majority of the space behind the counter but still leaving some room for other merchandise. Select More than 75% if tobacco dominates the space behind the counter, leaving little space for anything else.

**Section 3. Interior Marketing Materials**

Marketing materials: Any professionally manufactured/printed item that is branded that advertises, displays or promotes a product. This includes advertisements (signs, posters, sandwich boards), shelving units and functional items (e.g., trashcans, gas station handles, mirrors, doormats, counter mats, newspaper racks, “register closed” signs, neon signs).

<table>
<thead>
<tr>
<th>18</th>
<th>Marketing materials are located (does not include on-pack promo):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Front counter</td>
</tr>
<tr>
<td>Cigarettes, unflavored</td>
<td></td>
</tr>
<tr>
<td>Cigarettes, menthol</td>
<td></td>
</tr>
<tr>
<td>Chew/Snus, unflavored</td>
<td></td>
</tr>
<tr>
<td>Chew/Snus, flavored</td>
<td></td>
</tr>
<tr>
<td>Little cigarillos/cigars, unflavored</td>
<td></td>
</tr>
<tr>
<td>Little cigarillos/cigars, flavored</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>19</th>
<th>Interior marketing materials contain:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Price promotions</td>
</tr>
<tr>
<td>Cigarettes, unflavored</td>
<td></td>
</tr>
<tr>
<td>Cigarettes, menthol</td>
<td></td>
</tr>
<tr>
<td>Chew/Snus, unflavored</td>
<td></td>
</tr>
<tr>
<td>Chew/Snus, flavored</td>
<td></td>
</tr>
<tr>
<td>Little cigarillos/cigars, unflavored</td>
<td></td>
</tr>
<tr>
<td>Little cigarillos/cigars, flavored</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>20</th>
<th>Which products have on-pack promotions:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cigarettes, unflavored</td>
</tr>
<tr>
<td></td>
<td>Cigarettes, menthol</td>
</tr>
<tr>
<td></td>
<td>Cigarillos/little cigars, unflavored</td>
</tr>
<tr>
<td></td>
<td>Cigarillos/little cigars, flavored</td>
</tr>
<tr>
<td></td>
<td>Chew/Snus, unflavored</td>
</tr>
<tr>
<td></td>
<td>None of the above</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>21</th>
<th>Price promotions are advertised inside the store for (any brand, includes on-pack price promo, check all):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Special price on 1</td>
</tr>
<tr>
<td>Cigarettes, unflavored</td>
<td></td>
</tr>
<tr>
<td>Cigarettes, menthol</td>
<td></td>
</tr>
<tr>
<td>Chew/snus, unflavored</td>
<td></td>
</tr>
<tr>
<td>Chew/snus, flavored</td>
<td></td>
</tr>
<tr>
<td>Cigarillos/little cigars, unflavored</td>
<td></td>
</tr>
<tr>
<td>Cigarillos/little cigars, flavored</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>22</th>
<th>Are there any of these cross-product promotions? (Select all)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Buy cigarette pack(s), get free/discounted ENDS</td>
</tr>
<tr>
<td></td>
<td>Buy cigarette pack(s), get free/discounted TOBACCO</td>
</tr>
<tr>
<td></td>
<td>Buy cigarette carton(s), get free/discounted ENDS</td>
</tr>
<tr>
<td></td>
<td>Buy cigarette carton(s), get free/discounted TOBACCO</td>
</tr>
<tr>
<td></td>
<td>Other free/discount with TOBACCO purchase, please describe what you buy/what you get:</td>
</tr>
</tbody>
</table>
Section 4. ENDS/e-cigarettes

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 Are any ENDS/e-cigarettes sold here?</td>
<td>o Yes</td>
</tr>
<tr>
<td></td>
<td>o No [Skip section]</td>
</tr>
<tr>
<td>24 Which types of ENDS are sold and price promotions?</td>
<td>Sold</td>
</tr>
<tr>
<td>Disposable cigarette lookalikes (e.g., blu/NJOY)</td>
<td>☐</td>
</tr>
<tr>
<td>Rechargeable/Refillable cigarette lookalikes (e.g., blu/NJOY/blu)</td>
<td>☐</td>
</tr>
<tr>
<td>Vape pens/tanks/MODS (must be rechargeable/refillable)</td>
<td>☐</td>
</tr>
<tr>
<td>E-hookah (anything labeled e-hookah)</td>
<td>☐</td>
</tr>
<tr>
<td>E-cigars (anything labeled e-cigar)</td>
<td>☐</td>
</tr>
<tr>
<td>E-liquid</td>
<td>☐</td>
</tr>
<tr>
<td>25 Select all categories of ENDS for which there are on pack promotions:</td>
<td>☐ blu e-cigarettes (any)</td>
</tr>
<tr>
<td></td>
<td>☐ NJOY e-cigarettes (any)</td>
</tr>
<tr>
<td></td>
<td>☐ Any OTHER ENDS</td>
</tr>
<tr>
<td></td>
<td>☐ None of the above</td>
</tr>
<tr>
<td>26 Are there any of these promotions for ENDS? (Select all)</td>
<td>☐ Buy ENDS device, get free/discounted e-liquid/cartridge</td>
</tr>
<tr>
<td></td>
<td>☐ Buy ENDS device, get free/discounted accessory</td>
</tr>
<tr>
<td></td>
<td>☐ Buy ENDS device, get free/discounted other ENDS type</td>
</tr>
<tr>
<td></td>
<td>☐ Buy ENDS device, get free/discounted tobacco</td>
</tr>
<tr>
<td></td>
<td>☐ Buy ENDS device, get free/discounted trinket</td>
</tr>
<tr>
<td></td>
<td>☐ Other free/discount with ENDS purchase (describe):</td>
</tr>
<tr>
<td>27 What flavors of ENDS are available: (Select all)</td>
<td>Mint</td>
</tr>
<tr>
<td>Disposable ENDS</td>
<td>☐</td>
</tr>
<tr>
<td>Rechargeable ENDS/cartridges</td>
<td>☐</td>
</tr>
<tr>
<td>E-liquid</td>
<td>☐</td>
</tr>
<tr>
<td>28 Where/how are ENDS product located in the store?</td>
<td>Front counter</td>
</tr>
<tr>
<td>blu</td>
<td>☐</td>
</tr>
<tr>
<td>NJOY</td>
<td>☐</td>
</tr>
<tr>
<td>Any other ENDS</td>
<td>☐</td>
</tr>
<tr>
<td>29 ENDS are placed/shelved next to what products? (Select all)</td>
<td>☐ Tobacco products</td>
</tr>
<tr>
<td></td>
<td>☐ Alcohol</td>
</tr>
<tr>
<td></td>
<td>☐ Kid stuff</td>
</tr>
<tr>
<td></td>
<td>☐ NRT products</td>
</tr>
<tr>
<td></td>
<td>☐ None of the above</td>
</tr>
<tr>
<td>30 Are there any ENDS marketing materials?</td>
<td>☐ Yes</td>
</tr>
<tr>
<td></td>
<td>☐ No [SKIP next 2 questions]</td>
</tr>
<tr>
<td>31 ENDS INTERIOR marketing materials are located:</td>
<td>Front counter</td>
</tr>
<tr>
<td>blu</td>
<td>☐</td>
</tr>
<tr>
<td>NJOY</td>
<td>☐</td>
</tr>
<tr>
<td>Any other ENDS</td>
<td>☐</td>
</tr>
</tbody>
</table>
Are any ENDS INTERIOR marketing materials located:

<table>
<thead>
<tr>
<th></th>
<th>At or below 3-feet</th>
<th>Near NRT product</th>
<th>Near kid stuff</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>blu</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>NJOY</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Any other ENDS</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

Do any ENDS INTERIOR marketing materials contain:

<table>
<thead>
<tr>
<th></th>
<th>Price promotion</th>
<th>Cartoon imagery</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>blu</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>NJOY</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Any other ENDS</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

The following questions are for a blu e-cigarette, Classic Tobacco (disposable, single unit):

A. Is this item sold?
   - Yes
   - No [Skips next series of questions]

B. Single item price ($XX.XX. Enter “0.09” if store sells variety but price is unavailable)
   - $XX.XX

C. Is the price discounted?
   - Yes
   - No
   - Refused

D. Is sales tax included in the price?
   - Yes
   - No
   - Refused

E. Are blu disposable e-cigarettes also available in Magnificent Menthol? (Green package)
   - Yes, for the same price [SKIP NEXT QUESTION]
   - Yes, for a different price
   - No, not sold [SKIP NEXT QUESTION]

The following questions are for a blu e-cigarette, Magnificent Menthol (disposable, single unit):

A. Is this item sold?
   - Yes
   - No [Skips next series of questions]

B. Single item price ($XX.XX. Enter “0.09” if store sells variety but price is unavailable)
   - $XX.XX

C. Is the price discounted?
   - Yes
   - No
   - Refused

D. Is sales tax included in the price?
   - Yes
   - No
   - Refused
The following questions are for a NJOY e-cigarette, traditional bold (red package, disposable, single unit):

A. Is this item sold?
   - Yes
   - No

NJOY King disposable e-cigarette in Traditional Bold

B. Single item price ($XX.XX. Enter “0.09” if store sells variety but price is unavailable)
   - $XX.XX

C. Is the price discounted?
   - Yes
   - No
   - Refused

D. Is sales tax included in the price?
   - Yes
   - No
   - Refused

E. Are Blu disposable e-cigarettes also available in Menthol Bold (Dark green package, disposable, single unit):
   - Yes, for the same price [SKIP NEXT QUESTION]
   - Yes, for a different price
   - No, not sold [SKIP NEXT QUESTION]

The following questions are for a NJOY e-cigarette, Menthol Bold (Dark green package, disposable, single unit):

A. Is this item sold?
   - Yes
   - No

NJOY King disposable e-cigarette in Menthol Bold

B. Single item price ($XX.XX. Enter “0.09” if store sells variety but price is unavailable)
   - $XX.XX

C. Is the price discounted?
   - Yes
   - No
   - Refused

D. Is sales tax included in the price?
   - Yes
   - No
   - Refused

Section 5. Tobacco Product Prices

The following questions are for Marlboro “Reds” (original regular hard pack)

A. Is this item sold?
   - Yes
   - No

B. How many pack facings of Marlboro Red are on display?

C. Single item price ($XX.XX. Enter “0.09” if store sells brand but price is unavailable)
   - $XX.XX

D. Is the price discounted?
   - Yes
   - No
   - Refused

E. Is sales tax included in the price?
   - Yes
   - No
   - Refused
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Is this item sold?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>B. How many pack facings of Newport Menthol are on display?</td>
<td>____</td>
</tr>
<tr>
<td>C. Single item price ($XX.XX. Enter “0.09” if store sells brand but price is unavailable)</td>
<td>$XX.XX</td>
</tr>
<tr>
<td>D. Is the price discounted?</td>
<td>Yes, No, Refused</td>
</tr>
<tr>
<td>E. Is sales tax included in the price?</td>
<td>Yes, No, Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Is this item sold?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>B. How many pack facings of Pall Mall Red are on display?</td>
<td>____</td>
</tr>
<tr>
<td>C. Single item price ($XX.XX. Enter “0.09” if store sells brand but price is unavailable)</td>
<td>$XX.XX</td>
</tr>
<tr>
<td>D. Is the price discounted?</td>
<td>Yes, No, Refused</td>
</tr>
<tr>
<td>E. Is sales tax included in the price?</td>
<td>Yes, No, Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Is this item sold?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>B. Single item price ($XX.XX. Enter “0.09” if store sells brand but price is unavailable)</td>
<td>$XX.XX</td>
</tr>
<tr>
<td>C. Is the price discounted?</td>
<td>Yes, No, Refused</td>
</tr>
<tr>
<td>D. Is sales tax included in the price?</td>
<td>Yes, No, Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Is this item sold?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>B. Single item price ($XX.XX. Enter “0.09” if store sells brand but price is unavailable)</td>
<td>$XX.XX</td>
</tr>
<tr>
<td>C. Is the price discounted?</td>
<td>Yes, No, Refused</td>
</tr>
<tr>
<td>D. Is sales tax included in the price?</td>
<td>Yes, No, Refused</td>
</tr>
</tbody>
</table>

What's the largest pack of cigarillos/little cigars that can be purchased for less than $1.00? (Select one)

- Not sold
- Four or more
- Three
- Two
- One (sold as singles)
- None (All quantities are more than $1.00)
44 The following questions are for Aquafina water (20 oz bottle):

A. Is this item sold?
   - Yes
   - No

B. Single bottle price ($XX.XX. Enter "0.09" if store sells brand but price is unavailable)
   - $XX.XX

C. Is the price discounted?
   - Yes
   - No
   - Refused

D. Is sales tax included in the price?
   - Yes
   - No
   - Refused

45 Cheapest Pack of Cigarettes: Ask the cashier "What's the cheapest single pack of cigarettes? How much is it?"

If the cashier refuses, attempt to discern the cheapest pack price by looking at advertised prices.

A. Price was obtained:
   - Yes
   - No (unable to obtain price)

B. Cheapest single pack of cigarettes ($XX.XX): Enter price
   - $XX.XX

C. Is the price discounted?
   - Yes
   - No
   - Refused

D. Is sales tax included?
   - Yes
   - No
   - Refused

Please thank the clerk and proceed to the exterior of the store.

46 Exterior marketing materials are located:

<table>
<thead>
<tr>
<th></th>
<th>On clear windows/doors</th>
<th>Elsewhere</th>
<th>At or below 3 ft.</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarettes, unflavored</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigarettes, menthol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigarillos/little cigars, unflavored</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigarillos/little cigars, flavored</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chew/Snus, unflavored</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chew/Snus, flavored</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blu e-cigarettes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NJoy e-cigarettes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any OTHER ENDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

47 Price promotions are advertised OUTSIDE the store (any brand, includes on-pack price promo, check all):

<table>
<thead>
<tr>
<th></th>
<th>Special price on 1</th>
<th>Multi-buy price promo</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarettes, unflavored</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigarettes, menthol</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Chew/snus, unflavored</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cigarillos/little cigars, flavored</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any ENDS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
48 Exterior marketing materials contain images for these: (Any photo, drawing or graphic depiction that is NOT a company logo or text including products/packs. Does NOT apply to ENDS)
   - Tobacco products, unflavored
   - Tobacco products, flavored
   - ENDS, unflavored
   - ENDS, flavored
   - None of the above

49 Final disposition
   - Completed
   - Partial/Exception (Please explain): ______________________________________

50 Enter any other relevant information about this store audit (e.g., “Store was discontinuing tobacco product sales and had very few products left in stock. Most product availability was coded based on shelf labels.”)