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Characteristics and Reach Equity of Policies Restricting Flavored Tobacco Product Sales in the United States

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Abstract

In 2009, flavored cigarettes (except menthol) were banned in the United States, but other flavored tobacco products (FTPs) were allowed. Women, populations of color, youth, sexual minority, and low-socioeconomic status populations disproportionately use FTPs. Localities have passed sales restrictions on FTPs that may reduce disparities if vulnerable populations are reached. This study assessed the extent to which FTP restrictions reached these subgroups (“reach equity”). We identified 189 U.S. jurisdictions with FTP policies as of December 31, 2018. We linked jurisdictions with demographics of race/ethnicity, gender, age, partnered same-sex households and household poverty, and stratified by policy strength. We calculated Reach Ratios (ReRas) to assess reach equity among subgroups covered by FTP policies relative to their U.S. population representation. Flavor policies covered 6.3% of the U.S. population (20 million individuals) across seven states; 0.9% were covered by strong policies (12.7% of policies). ReRas indicated favorable reach equity to young adults, women, Hispanics, African Americans, Asians, partnered same-sex households, and those living below poverty. Youth, American Indians/Alaska Natives (AIAN) and Native Hawaiians/Pacific Islanders (NHPI) were underrepresented. Strong policies had favorable reach equity to young adults, those living below poverty, Asians, NHPIs, individuals of 2+ races, and partnered same-sex households, but unfavorable reach equity to women, youth, Hispanic, AIAN, and African American populations. U.S. flavor policies have greater reach to many, but not all, subgroups at risk of FTP use. Increased enactment of strong policies to populations not covered by flavor policies is warranted to ensure at-risk subgroups sufficiently benefit.

Keywords

public policy; health equity; health disparities; tobacco control; vulnerable populations

BACKGROUND

Flavored tobacco product (FTP) use compared with non-FTP use has been associated with increased risk of initiation, progression to regular use, decreased quitting success, and increased nicotine dependence (Huang et al., 2017; Villanti, Collins, Niaura, Gagosian, & Abrams, 2017). FTPs are particularly appealing to youth and make it easier to use tobacco products; menthol in particular has a numbing effect on the throat, which masks the otherwise harsh sensation of smoke (Yerger & McCandless, 2011). Youth use FTPs at higher rates compared with older tobacco users and using an FTP at first use has been associated with a 13% higher prevalence of current tobacco use among youth ever-users (Villanti, Johnson, et al., 2017).

FTPs are also used disproportionately among vulnerable population tobacco users, especially youth (80% among 12- to 17-year-olds) and young adult (73% among 18- to 24-year-olds) versus older adults age 65+ (29%; Villanti, Johnson, et al., 2017). Among all ages of current cigarette smokers, menthol cigarettes were used at higher prevalence by females versus males (43.5% vs. 34.8%), those of lower household income (43.7% <\$30,000 vs. 32.1% \$75,000+); and African Americans (84.6%), Hispanics (46.9%), Asians (38.0%), and non-Hispanics (NH) of “Other” race (46.7%) versus NH Whites (28.9%; Villanti et al., 2016). Among U.S. adults who use a noncigarette tobacco product, any flavored noncigarette use is more prevalent among young adults (e.g., 83.5% vs. 26.3% for those 65+ years old), those with lower household income (e.g., 62.7% for incomes <\$20,000 vs. 53.8% for those over \$100,000), African Americans (71.8%), Hispanics (68.6%), NH “Other” race (74.6%) vs. NH Whites (55.7%), and Lesbian, Gay, Bisexual (LGB) versus straight populations (79.7% vs. 59.6%; Bonhomme et al., 2016).

In 2009, U.S. federal law banned flavors in cigarettes; however, menthol was exempted, and all flavors are permitted in other tobacco products. Some localities have enacted policies restricting FTP sales. These local policies vary in terms of the type of products included, whether menthol/mint is considered a restricted characterizing flavor, and the type of stores or locations where the sales restrictions apply (Chen, Green, Jie, Hoke, & Borzekowski, 2018). For example, New York City currently restricts the sale of noncigarette FTPs like cigars and smokeless tobacco, but the policy is limited by an exemption for menthol-/mint-flavored products and any flavored e-cigarettes (Farley & Johns, 2017). Other jurisdictions like Chicago and San Francisco restrict the sale of all types of FTPs. However, Chicago’s ordinance is geographically limited to only apply to retail stores within 500 feet of high schools, while San Francisco’s ban is both comprehensive of all tobacco products, flavor types and applies to all retailers throughout the jurisdiction (Bach, 2019).

This study draws on the socioecological model, which situates individual behaviors within a multilevel framework of intrapersonal, community/neighborhood environments, and the larger societal and policy context (McLeroy, Bibeau, Steckler, & Glanz, 1988) and the social determinants of health (SDoH), which are the “conditions in the environments in which people are born, live, learn, work, play, worship and age,” that affect their health (Office of Disease Prevention and Health Promotion, 2014). These frameworks suggest that tobacco control policies such as FTP restrictions affect individual behavior by changing exposures in

the tobacco marketing and advertising environment surrounding individuals. This in turn can change tobacco use social and individual norms and increase the “costs” for individuals in those communities to access and use FTPs, preventing initiation and promoting cessation (Garrett, Dube, Babb, & McAfee, 2015; Lieberman, Golden, & Earp, 2013).

Most evidence on the effect of flavor restrictions focuses on the impact among youth. The removal of flavored cigarettes from the market resulted in significant declines in youth cigarette smoking, but at the same time, an increased prevalence of menthol cigarette, cigar, and pipe tobacco use was demonstrated, suggesting possible substitution with remaining FTPs (Courtemanche, Palmer, & Pesko, 2017). Although implementation of local FTP sales restrictions has been associated with declines in FTP use among youth (Farley & Johns, 2017), few studies have assessed the potential for effects of flavor restrictions on subpopulations most vulnerable to FTP use, including younger users, women, individuals with low socioeconomic status, racial/ethnic and sexual minority groups. One study in the literature found that among localities with restrictions on flavored e-cigarettes as of October 2017, jurisdictions with lower percentages of NH White residents tended to have stronger restrictions (Chen et al., 2018).

PURPOSE

For policies to have an impact on subgroups most affected by FTP use, policy analyses should examine the extent to which these policies equitably reach these populations, termed “reach equity.” The purpose of this study is to (1) describe variation in current FTP policies in the United States and (2) estimate the potential reach equity of any and strong FTP policies to vulnerable subgroups using the reach ratio (ReRa), a measure used previously to estimate reach equity of cessation interventions at the population level (Amato & Graham, 2018; Campbell, Baskerville, Hayward, Brown, & Ossip, 2013).

METHOD

Policy Database

We identified a comprehensive list of 189 U.S. jurisdictions that enacted an FTP sales restriction as of December 31, 2018. An initial list of policies was identified by comparing existing lists maintained by state and national tobacco control organizations including the Public Health Law Center, Campaign for Tobacco-Free Kids, Massachusetts Health Officers Association, Tobacco Free RI, and Center 4 Health Policy. We then updated the list through consultation with other tobacco control partner organizations, as well as searching social media platforms, and news articles. The final list was reviewed by Truth Initiative Public Policy experts SYG and MA and an expert at the Public Health Law Center.

Data Collection

We retrieved text of local ordinances from online sources, such as city council meeting notes or municipal code. We coded each policy for: locality (town, city, incorporated county, unincorporated county, state), enactment date, type of tobacco product included in the sales restriction (menthol cigarettes, e-cigarettes, premium cigars, cigars, little cigars, hookah, smokeless tobacco), whether menthol, mint, or wintergreen was included as a restricted

flavor, presence of any buffer zone near schools, libraries, parks or playgrounds, which would limit the number of affected retail stores; and exemptions for any retail types where the policy does not apply, such as adult-only venues, liquor stores, existing tobacco retailers, tobacco store, or vape shops. Similar to Chen et al. (2018), we classified a subset of policies as “strong” if they (1) included menthol cigarettes and (2) did not include any buffer zone area. We did not include retailer type exemptions in our determination of policy strength as, based on news and partner reports, some retailer exemptions may have only exempted a small number of retailers in the locality (e.g., Gilbert, 2015). All ordinances were coded independently by two trained research staff and any discrepancies were resolved by consensus. The lead author and a legal expert at the Public Health Law Center reviewed any ambiguous policies to make a final determination.

Measures

We geocoded each locality and linked them with the following subpopulation demographic characteristics from 2012 to 2016 American Community Survey (ACS) 5-year estimates: race/ethnicity (Hispanic, and non-Hispanics of White, African American, American Indian/Alaska Native, Asian, Native Hawaiian/Pacific Islander [NHPI], and 2+ race), gender (male, female), age (<18 years old, 18-24 years old, 25 years and older), education (less than high school, high school/GED, some college, bachelors or more), household poverty (less than federal poverty level, at or above federal poverty level), and partnered same-sex households. The federal poverty level designation provided in the ACS is related to family size and is recalculated annually, for example \$24,300 for a family of four in 2016 (<https://aspe.hhs.gov/computations-2016-poverty-guidelines>). Note that all measures were at the individual level, except for partnered same-sex households, which was at the level of households because the ACS does not assess individual sexual orientation. We also linked localities having FTP policies with other tobacco control policies in the jurisdiction. Smoke-free air coverage at the state level was derived from data from the American Nonsmokers’ Rights Foundation (<https://nosmoke.org/>), and data on tobacco tax coverage at the state level for 2018 was derived from the CDC STATE System (<https://www.cdc.gov/statesystem/index.html>).

Data Analysis

Characteristics of Policies Analysis.—For each policy attribute coded in the database, we calculated the number and proportion of policies that featured that attribute. We also examined the relationship of localities with FTP policies with the presence of other state-level tobacco control policies.

Reach Equity Analysis.—Point estimates and 90% margins of error (MOEs) for the population proportions of each group were generated from the ACS for each locality covered by a flavor restriction. For some areas unavailable in the ACS (e.g., unincorporated counties), we aggregated data across subcounty census geographies to generate point estimates and MOE approximations at a 90% confidence interval (CI) and provide comparable estimates to localities directly provided by the ACS. We then aggregated across point estimates for all localities with a flavor policy to produce overall point estimates and

MOEs to estimate the numbers of individuals or households by demographic subgroup living in areas covered by flavor bans.

Next, we calculated a series of ReRas to estimate the reach equity to each subpopulation covered by a flavor policy. The ReRa is a new indicator of reach equity that is simple to understand by both policy makers and the public. Although originally used to evaluate the reach equity of quit lines, the ReRa is also useful for understanding the reach equity of other population-level interventions and policies. For example, researchers have used ReRas to assess reach equity of a quit line in the context of a policy intervention of new tobacco warning labels (Baskerville et al., 2015). Extending its use to the policy context can help stakeholders understand the potential equity implications of a broad range of tobacco control strategies. The reach ratio equation represents a proportion of proportions:

$$ReRa = \frac{\% \text{ of subpopulation in the population covered by flavor policy}}{\% \text{ of subpopulation in the national US population}}$$

A ReRa with a 95% CI that included 1.0 indicated that the proportion of a group covered by FTPs was equal to its proportion among the general population. A ReRa greater than 1.0 indicated greater reach equity to subpopulations covered by flavor policies; less than 1.0 indicated inequitable policy reach. We calculated ReRas for the entire population in all localities with any FTP sales restrictions ($n = 189$) and then for the subset of localities that had a “Strong” policy ($n = 24$). All analyses and visualizations were conducted using R version 3.4.4.

We calculated pseudo-95% CIs for each ReRa using Monte Carlo simulation, rather than the delta method used by Campbell et al. (2013), in order to include uncertainty in the locality-level point estimates from the ACS. First, we ran 9,999 simulations that recalculated ReRas drawing on the locality-level point estimates from the ACS and on the reported distribution of their uncertainty based on the previously calculated MOE. We took the 2.5th and 97.5th percentile of this distribution of ReRas as lower and upper bounds of pseudo-confidence intervals. Unreported comparisons with the delta method for calculating confidence intervals indicated that the Monte Carlo approach produced similar but slightly larger confidence intervals.

RESULTS

Characteristics of Policies

Overall, there were 189 jurisdictions with some type of FTP policy in the United States as of December 31, 2018. FTP restrictions were present in 68 cities, 113 towns, and 7 counties across 7 states: California ($n = 29$), Illinois ($n = 1$), Massachusetts ($n = 144$), Minnesota ($n = 9$), New York ($n = 1$), Rhode Island ($n = 4$), and Maine enacted a statewide sales restriction on flavored cigars.

Table 1 provides an overview of the policies currently enacted. The first FTP policy was enacted in Maine in 2007 on flavored cigars, however, more than 70% of policies were enacted since 2016. Most policies (85%) exempt menthol cigarettes and 3% exempt the sale

of at least one type of flavored noncigarette tobacco product. Almost 84% of policies exempt menthol/mint flavorings from all tobacco products. Only 3 localities had ordinances that included a buffer zone around a youth-serving location, but 87% of policies included an exemption for at least one retailer type with most of those allowing sales of FTPs at adult-only venues or tobacco stores only accessible to adults either 18 or 21 years or older. Based on this coding and a priori criteria adapted from Chen et al. (2018), we classified 24 policies as “strong” meaning that they included all FTPs including menthol cigarettes and did not have geographic restrictions. All strong policies were enacted from between 2016 and 2018 with over 90% enacted in 2017 ($n = 6$) or 2018 ($n = 16$). Most jurisdictions (75%) with strong policies were in California.

Reach Equity

Across areas with any FTP policy we estimated a population of 20.1 million, out of 318.6 million individuals living in the United States. The 24 localities with strong policies covered 2.1 million residents. From this we estimated that 6.3% of the U.S. population was covered by any FTP policy and 0.9% by a strong policy.

Table 2 and Figure 1 show the results of the reach equity analysis. For any FTP policy relative to the U.S. population, we found greater reach equity to vulnerable populations by race/ethnicity to Hispanics and African American, Asian, and Other Race populations; by gender to women; by age to young adults (18-24); by education to those with less than a high school education; by income to those in households below the federal poverty limit; and by sexual minority status to partnered same-sex households (i.e., ReRa and 95% CI > 1). Those of 2 or more races were reached by FTP policies in proportion to their representation in the population (i.e., ReRa and 95% CI includes 1). We found inequitable reach to American Indians/Alaska Natives (AIAN) and Native Hawaiians/Pacific Islanders (NHPI) populations (i.e., ReRa and 95% CI < 1).

Among vulnerable populations covered by strong policies, we estimated greater reach equity to Asian, NHPI, and Other race populations, young adults, individuals living below the federal poverty line, and partnered same-sex households. African American, Hispanic, and AIAN populations, along with populations of lower education level were inequitably reached by strong policies.

For both any and strong FTP policies we found inequitable reach to youth who may benefit the most from FTP policy protection.

DISCUSSION

FTP sales restrictions are an emerging policy area in the United States that have gained momentum over the past decade. Adoption of strong policies has also accelerated recently, likely due in part to San Francisco’s strong flavor restriction policy serving as a model policy after surviving a ballot referendum against a well-funded tobacco-industry opposition effort (Yang & Glantz, 2018). However, as of December 31, 2018, less than 1 in 15 individuals in the United States were covered by any FTP policy, and less than 1% were covered by a strong policy, including sales restrictions on menthol cigarettes and area-wide

coverage. Unfortunately, widespread exemptions on sales of menthol or mint flavors creates considerable opportunities for FTP use among younger users. For instance, national data on flavored e-cigarette use found that among youth e-cigarette users who used multiple flavor types, over a third used mint/menthol flavor (Soneji, Knutzen, & Villanti, 2019). By enacting statewide FTP policies, vulnerable populations would be reached more quickly.

Current FTP policies provided reach equity to vulnerable populations defined by education and income, young adults, women, and partnered same-sex households. They also provided equitable reach to many communities of color but notably lack equitable reach to AIAN and NHPI populations who have some of the greatest tobacco use disparities among racial/ethnic minority groups in the United States; for example, current tobacco use prevalence among NHPI (23.4%) and AIAN (20.6%) middle and high school students is higher than any other group (Odani, Armour, & Agaku, 2018). The population protected by any FTP policy included a larger proportion of African Americans than the national population but the population protected by strong FTP policies (which include restrictions on menthol cigarette sales) included a smaller proportion of African Americans than the national population. Increasing enactment of strong FTP policies including menthol cigarettes in areas with larger African American and Hispanic populations can help protect communities that have disproportionately high use of this product and have been subject to menthol marketing for many years (Gardiner, 2004; Landrine et al., 2005). Encouragingly, partnered same-sex households are reached equitably by strong FTP policies.

This study is the second to examine the potential equity impact of FTP policies in the United States. It substantially extends the work of Chen et al. (2018) on flavored e-cigarette sales restrictions to include policies affecting all FTPs, including combustibles. It also introduces a new measure, the reach ratio, for examining reach equity. Nonetheless, the study has several limitations. First, we capture jurisdictions that were early adopters of FTP policies as of 2018 and were mostly concentrated in states with existing strong policy environments (Combs et al., 2019). Such contexts may reflect variation across at-risk subpopulations who may benefit from these policy efforts. Second, our search process was extensive, however, it is possible we did not include all localities with FTP policies. Third, our estimates of reach reflect only partnered same-sex households rather than sexual minority individuals given the lack of census data on this subgroup. As such, these results should not be generalized as an estimate of the reach of FTP policies to LGB populations overall. Finally, because our analyses used census estimates, many effects were statistically significant even though their magnitude was small; policy makers are encouraged to focus on the ReRas as effect sizes.

IMPLICATIONS FOR POLICY

U.S. flavor policies have greater reach to many, but not all, vulnerable populations at risk of FTP use, supporting the potential of these policies to improve health equity. However, the majority policies included exemptions that limited restrictions either to specific tobacco products or to a geographic area. Implementation of strong tobacco product flavor restrictions is an important tool in helping ensure effective tobacco control efforts, particularly to groups most affected by menthol cigarette and other FTP use. These national-level results can inform the research community, tobacco control partners involved with FTP

policies, and public comments to support FDA rulemaking regarding FTPs. Local communities and advocates considering FTP policies should also consider conducting a reach equity analysis to estimate how such policies could address local-level tobacco health equity. Finally, results from this study can be used by members of vulnerable groups to advocate for new or strengthened FTP policies to protect their communities, and its methods can be used to evaluate the reach equity of future policies. Continued focus by policy makers, advocates, vulnerable communities, and the general public on populations covered by flavor policies can be an essential strategy to help reduce tobacco use disparities at the population level.

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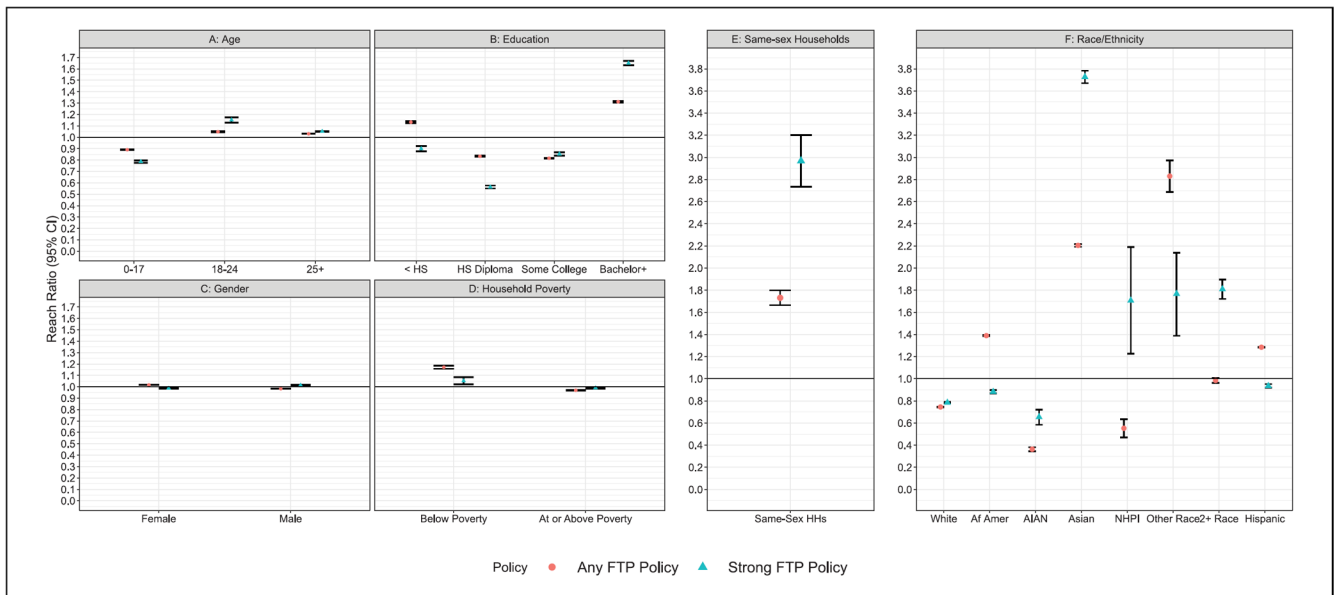


Figure 1. Forest Plots of Reach Ratios (ReRas) for Each Vulnerable Population by Any and Strong Flavored Tobacco Product (FTP) Policy^{a,b}

^a95% confidence interval (CI) >1 indicate greater reach equity of the policy to the group relative to its population proportion; 95% CI including 1 indicate equitable reach relative to population proportion and 95% CI <1 indicate lesser reach equity to the group relative to its population proportion. ^bHousehold poverty estimates are based on a denominator of the subset of the total population for whom poverty status was determined.

TABLE 1
 Characteristics of Flavored Tobacco Product Policies in the United States as of December 31, 2018

Policy Characteristics (n = 189)	Policies	
	n	(%)
Enactment year		
2007	1	(0.5)
2008	0	(0.0)
2009	1	(0.5)
2010	0	(0.0)
2011	0	(0.0)
2012	2	(1.1)
2013	1	(0.5)
2014	15	(7.9)
2015	29	(15.3)
2016	49	(25.9)
2017	36	(19.0)
2018	55	(29.1)
Products included in sales restriction		
Menthol cigarettes	28	(14.8)
E-cigarettes	187	(98.9)
Premium cigars	184	(97.3)
Large cigars	187	(98.9)
Little cigars	187	(98.9)
Cigarillos	189	(100.0)
Smokeless tobacco	184	(97.3)
Hookah/waterpipe	188	(99.5)
Roll your own tobacco/pipe tobacco	188	(99.5)
Any noncigarette exemption	6	(3.2)
Flavors included		
Menthol/mint/wintergreen	31	(16.4)
Any other characterizing flavor (e.g., fruit, candy)	189	(100.0)
Area buffer zone		

Near schools	3	(1.6)
Near parks, playgrounds, library	1	(0.5)
No buffer zone (area-wide)	186	(98.4)
Strong policy		
Yes (includes menthol cigarettes and no buffer zone)	24	(12.7)
No	165	(87.3)
Retailer type exemption		
Liquor store	2	(1.1)
Vape shops	2	(1.1)
Tobacco store ^a	11	(5.8)
Adult only venue (18+)	2	(1.1)
Adult only venue (21+)	152	(80.4)
Smoking bar/tobacco bar ^b	147	(77.8)
Existing retailers	1	(0.5)
No retailer exemption (all retailers subject to policy)	25	(13.2)

Policies

	n	(%)
State Level Characteristics (n = 7)^{c,d}		
Presence of smoke-free air laws		
Nonhospitality workplaces	7	(100.0)
Restaurants	7	(100.0)
Bars	7	(100.0)
Average cigarette excise tax (2018)	n of States	Mean (\$)
States with flavored tobacco policies	7	3.14
States without flavored tobacco policies	44 ^e	1.58

^aIncludes retail stores that primarily sell tobacco products or specialty retail stores with at least [X]% of the revenue derived from tobacco.

^bRefers to establishments where tobacco products are purchased for consumption on the premises.

^cIn total, seven states has flavored tobacco policies: California (n = 29), Illinois (n = 1), Massachusetts (n = 144), Maine (n = 1), Minnesota (n = 9), New York (n = 1), Rhode Island (n = 4).

^dData on smoke-free air laws was retrieved from American Nonsmoker Rights Foundation; data on cigarette excise tax was retrieved from the CDC State System.

^eIncludes the District of Columbia.

TABLE 2
Reach Ratios for Vulnerable Populations Covered by Any Flavor Policies and Strong Flavor Policies

Characteristic	U.S. Population (%)	Any Policy (%)	Reach Ratio Any Policy ^a [95% CI]	Strong Policy (%)	Reach Ratio Strong Policy ^b [95% CI]
Race/ethnicity					
NH White	62.0	46.2	0.745 [0.744, 0.746]	48.6	0.784 [0.779, 0.789]
NH African American ^c	12.3	17.1	1.390 [1.385, 1.394]	10.8	0.882 [0.867, 0.897]
NH American Indian/Alaska Native (AIAN)	.07	0.2	0.363 [0.346, 0.381]	0.4	0.654 [0.585, 0.722]
NH Asian	5.2	11.4	2.205 [2.193, 2.218]	19.2	3.726 [3.670, 3.783]
NH Native Hawaiian and Pacific Islander (NHPI)	0.2	0.1	0.553 [0.471, 0.635]	0.3	1.707 [1.228, 2.191]
NH other race	0.2	0.6	2.830 [2.688, 2.973]	0.4	1.768 [1.388, 2.139]
NH two or more races	2.3	2.2	0.985 [0.963, 1.008]	4.1	1.809 [1.721, 1.898]
Hispanic	17.3	22.3	1.285 [1.281, 1.289]	16.2	0.935 [0.918, 0.952]
Gender					
Female	50.8	51.6	1.016 [1.015, 1.017]	50.1	0.987 [0.983, 0.991]
Male	49.2	48.4	0.983 [0.982, 0.984]	49.9	1.013 [1.009, 1.018]
Age (years)					
<18	23.1	20.6	0.891 [0.888, 0.894]	18.2	0.786 [0.775, 0.798]
18-24	9.8	10.3	1.048 [1.042, 1.054]	11.3	1.152 [1.128, 1.175]
25+	67.1	69.1	1.031 [1.030, 1.031]	70.5	1.051 [1.048, 1.055]
Education					
<High school	13.1	14.9	1.133 [1.124, 1.140]	11.8	0.899 [0.875, 0.922]
High school/GED	27.8	23.2	0.833 [0.829, 0.838]	15.7	0.564 [0.551, 0.577]
Some college	31.3	25.5	0.816 [0.812, 0.820]	26.7	0.854 [0.840, 0.868]
Bachelor's degree or more	27.7	36.4	1.312 [1.305, 1.319]	45.8	1.650 [1.631, 1.670]
Household poverty					
<Federal poverty limit	15.1	17.7	1.171 [1.159, 1.184]	15.9	1.052 [1.021, 1.083]
At or above federal poverty limit	84.9	82.3	0.969 [0.967, 0.972]	84.1	0.991 [0.985, 0.997]
Same-sex household ^{d,e}	0.4	0.7	1.73 [1.665, 1.799]	1.2	2.967 [2.734, 3.202]

NOTE: NH = non-Hispanics; CI = confidence interval.

- ^aReach Ratio calculated as percentage of population covered by any flavor policy/percentage of U.S. population in each category.
- ^bReach ratio calculated as percentage of population covered by strong flavor policy/percentage of U.S. population in each category.
- ^cGroups listed in bold are considered vulnerable populations that are subject to disparities in use of flavored tobacco products (FTPs).
- ^dPercentage calculated is the percentage of households, not percent of individuals.
- ^eReach ratio calculated as $\frac{\text{partnered same-sex households (including married and unmarried male-male and female-female households)}}{\text{total households covered by flavor policies}} \div \frac{\text{U.S. same-sex households}}{\text{Total U.S. households}}$. The American Community Survey does not provide information that would allow the calculation of opposite sex partnered households or total partnered households.