Flavored Tobacco Products: An Educational Roundtable

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Abstract

Sacramento has a higher tobacco use rate than the rest of the state. Tobacco costs Sacramento $870 million dollars in health care costs. The Surgeon General has called vaping a youth epidemic. Sac City Unified School District saw a 50% increase in 11th grade vaping in 2017-2018. Flavorings are the #1 reason kids start, and diacetyl in most flavorings can be harmful to lungs as a cause for bronchiolitis obliterans. Menthol is the only flavor still in cigarettes, but its chemicals make it easier to start and inhale but harder to quit. Targeted marketing has led to >70% African American smokers using menthol, and African Americans have one of the highest tobacco use rates in Sacramento and tobacco-related health disparities. Vaping is not approved for tobacco cessation, and has harmful chemicals that impact heart and lung health that is not just water vapor. Switching is not quitting with the risk of continued nicotine addiction, particularly with high potency nicotine.

2. Nationwide, Cancer Centers are taking action on tobacco. The Smoke and Tobacco-Free Initiative stems from being part of the National Cancer Institute’s Cancer Center Cessation Initiative, which is integrating tobacco treatment into cancer care across 42 cancer centers.

Tobacco and Cancer: Sacramento and Beyond
Moon Chen, Professor of Medicine and Associate Director, Population Sciences & Community Outreach and Engagement, UC Davis Comprehensive Cancer Center

1. Tobacco products cause cancer and worsen treatment. Tobacco causes 14 different cancers besides other chronic heart and lung disease and immune problems. Tobacco use worsens cancer treatment outcomes including wound healing after surgery or radiation, medication effectiveness, immune function, and development of secondary cancers.

2. Sacramento County has higher tobacco product use rates than the rest of California. In 2016-7, cigarette and vaping use was 15.9% in Sacramento County and 13.7% in California. Among those using tobacco products, vaping rates were 25.7% in Sacramento County and 19.2% in California. The total amount of current tobacco users in Sacramento County is estimated at 179,000 people, and in California is estimated at 4,022,000. (2016-2017 California Health Interview Survey)

3. Flavored tobacco product use has led to a national “epidemic” of youth use. The U.S. Centers for Disease Control and Prevention has reported that electronic cigarette use among high schoolers jumped by 80% in one year (1.5% in 2011, 11.7% in 2017, 20.8% in 2018), likely due to the flashdrive product
4. High rates of using flavored tobacco products in California and stagnating teen tobacco use rates. Among California adults who use other tobacco products besides cigarettes in 2016, 70% reported using flavors in the past 6 months. Among the subset of young adults aged 18-24, 80% reported using flavors. Among California teens, tobacco use rates have stagnated at 14% in 2016 despite less cigarette smoking (4% in 2016 and 14% in 2010).

Landscape of Flavored Tobacco Products

Kim Homer-Vagadori, Project Director, California Youth Advocacy Network

1. Rapidly growing variety of flavored tobacco products beyond cigarettes. Flavored tobacco products include liquids put into vaping devices, little cigars and cigarillos, and menthol cigarettes. E-cigarettes may also be called e-hookahs, hookah pens, vapes, vape pens, or mods. Some can only be used once, while others can be refilled or have tanks. Flavors had been removed from cigarettes except for menthol by the Food and Drug Administration (FDA) in 2009. Users may not identify as smokers, and asking about smoking only may not capture tobacco product use.

2. Extremely high levels of nicotine. New flashdrive products use tobacco salts, which are bioabsorbed easier with much less vapor. 1 flashdrive pod = 1 pack of cigarettes for nicotine content. Some products are now even more concentrated. Youth and adults alike may be unaware of the high levels of nicotine and symptoms of addiction.

3. Flavors, packaging, and marketing appeal to youth. The e-liquid is typically flavored, with over 15,500 unique flavors, which have doubled since 2014. Flavors that appeal to youth include fruit, candy, mint. Packaging that appeal to youth include bright colors, cartoons, toys. Kids are using products in the school classroom and bathroom, and rating them on YouTube videos.

4. Menthol is a starter flavor for California students. Among California high school students who smoke cigarettes, 44% use menthol cigarettes.

5. Tobacco industry is changing rapidly. Every tobacco company has a vaping product, and fall 2018 Altria (Philip Morris’ parent company) bought a 35% stake in the most popular flashdrive product brand (75% of the market). Now there are dozens of knock-off versions of the product. Altria is also seeking to introduce a “heat-not-burn” cigarette product called iQOS that is popular overseas.

Health and Cessation Concerns

Elisa Tong, Associate Professor, Department of Internal Medicine, UC Davis

1. Immediate and long-term health concerns for tobacco use and exposure. Immediate health effects occur within minutes for heart and lung function with fine particles and chemicals leading to inflammation. Long-term health effects occur over years for cancer risks, destruction of lung tissue, or atherosclerosis of the cardiovascular system.

2. Nicotine is not harmless. Increasing nicotine poisonings of young children attracted to flavored tobacco products and packaging, and harmful if e-liquid gets on skin or eyes. Nicotine negatively affects the young developing brain which matures by 25 years, and is associated with prefrontal cortex ability for judgment, attention, and behavior contributing to mental health issues. High levels of nicotine (60 mg) could potentially kill an adult, as it affects the cardiovascular system and is used in insecticides. In contrast, nicotine medication doses range from 1 mg to 21 mg (patch for 24 hour absorption).

3. Growing evidence of toxic effects from aerosol ingredients. Aerosol from electronic smoking devices: Polyethylene glycol is not water vapor and can irritate lungs; at least 10 toxic chemicals known to cause cancer or reproductive harm (e.g. formaldehyde, nickel, lead, benzene, cadmium, toluene, isoprene, acetaldehyde, N-Nitrosonornicotine). Flavorings: diacetyl is in 75% of flavored e-liquids and is associated with irreversible lung damage called bronchiolitis obliterans. Menthol: more likely to initiate, more likely to inhale deeper, less likely to quit; menthol acts on the nicotinic receptor which may affect addiction. Heated chemicals react differently than burned chemicals, and chemicals have different effects when inhaled than eaten. Growing body of scientific evidence comes from FDA-funded Tobacco Centers of Regulatory Science (e.g. UCSF), which informs the FDA, and California’s Tobacco-Related Disease Research Program.

4. Vaping is not recommended for cessation. There are 7 FDA-approved medications for cessation that are
not inhaled into the lungs and deliver less nicotine (nicotine patch, lozenge, gum, inhaler, nasal spray; bupropion and varenicline). The United States Preventive Services Task Force concluded there is “Insufficient” evidence to recommend electronic nicotine delivery devices for cessation. The FDA has not approved any vaping devices for cessation purposes. The risk of switching tobacco products, even for harm reduction purposes, is maintaining nicotine addiction and “dual use” of products.

5. Sacramento has a high health economic burden of $860 million for tobacco use and exposure. Sacramento county’s health economic costs from smoking are estimated at $860 million (see attachment). Immediate health effects like asthma and heart attacks create a significant health care burden and higher health care costs within 1 year. There are also significant indirect societal costs from loss of productivity.

African American Disparities including Menthol and Marketing


1. Menthol makes it easier to inhale tobacco toxins and harder to quit. The anesthetic qualities of menthol numb the throat, masking the harsh taste and burn of tobacco that allows for deeper inhalation of toxins and greater amounts of nicotine. The presence of menthol makes cigarettes harder to quit compared to other cigarettes, despite more quit attempts, as it may affect nicotine receptors (Ton et al., 2015; Levy et al., 2011). “The ‘cool refreshing taste of menthol’ ultimately, allows the poisons in cigarettes and cigarillos to ‘go down easier’.”(Dr. Phil Gardiner, African American Tobacco Control Leadership Council; see op ed with Dr. David Cooke, Head of General Thoracic Surgery, UC Davis and Task Force Chair of the Comprehensive Lung Cancer Screening Program)

2. Sacramento African Americans have high tobacco use disparities due to menthol. In California, 70% African American adults who smoke consume menthols, compared to 18% of white adults who smoke. In Sacramento County, African Americans have one of the highest smoking rates (19% or 20,000 people) (California Health Interview Survey 2015-2017).

3. Targeted marketing and pricing affects Sacramento neighborhoods. Research has shown how the tobacco companies have heavily marketed menthol products to African Americans since the 1960s, and is not just a “flavor preference.” Menthol cigarettes are 75 cents cheaper in Sacramento’s lower socioeconomic neighborhoods that have more African Americans (Oak Park compared to East Sacramento). Direct-mail coupons, in-store price promotions and advertising, retailer incentives are other key marketing strategies.

4. Packaging sizes. While cigarettes can only be sold as a pack (20 in a pack), other tobacco products like little cigars are often sold in small packages for less than a dollar. This makes it easier for low socioeconomic populations including youth and young adults to purchase.

Age Restriction Policies

Melanie Dove, Postdoctoral Fellow, Center for Health Care Policy Research, UC Davis

1. State age restriction and enforcement for under 21 years old. Since 2016, California has been the second state to implement a “Tobacco 21” law which prohibits sales of tobacco products to under 21 years of age (except active duty military). In California, 64% of current cigarette smokers started by the age of 18, and 96.3% started by the age of 26, so delaying initiation is thought to be an effective tobacco control strategy. Enforcement is conducted through “sting” operations with penalties under the Stop Access to Kids Enforcement (STAKE) Act. However, online sales do not verify age beyond “agreeing” to adult status, and can include resale sites like eBay or Craigslist or local online exchange boards.

2. California illegal sales are rising including in tobacco-only stores. In the California Youth Adult Tobacco Purchase Survey 2017-2018, retail violation rates are increasing for illegal sales to young adults 18-19 years: 13% to 22% for electronic smoking devices and 14% to 18% for tobacco. Among vape shops and tobacco store retailers, over 30% are still selling tobacco to 18-19 year olds.

3. Purchasing restrictions for California youth is not enough with widespread access. Among 208 California high school students under 18 years old and currently using electronic cigarettes, 50.8% borrowed them, 9.3% bought them in a store, 8.9% reported someone else bought them, 6.9% reported an adult gave them an electronic cigarette, 3.9% got them online, and 20% reported some other way. (2017 California Youth Risk Behavior Surveillance System). Since vaping products are refillable and rechargeable, traditional youth purchasing restrictions as for cigarettes that have a one-time use have major limitations.
Impact on Sacramento Schools

Joelle Orrock, Tobacco Use Prevention Education Coordinator, Sacramento County Office of Education

1. Sacramento County Office of Education coordinates Tobacco Use Prevention Education activities from California Department of Education funding with 5 school districts: Sacramento, Elk Grove, San Juan, Folsom, Twin Rivers. Through a competitive grant process, schools are funded to provide programs for grades 6-12 with evidence-based tobacco-specific prevention and cessation programs for adolescents within the school setting.

2. Students are using products at school and seeing it in digital/social media. Local parents and educators are calling several times a week about students using these products. Parents and teachers may not be aware of these products which do not look like traditional cigarettes, as they can be put into hoodie strings or on top of water bottles. Bathrooms are a common place for use. With less aerosol and flavored odors, students are using tobacco products in the classroom and blowing it out under the desk or inside their shirts. Social influencers, including teens, promote products through YouTube product reviews, Instagram, and tweets which make it difficult to track.

3. Sacramento high school student vaping has risen by 50% despite cigarette use dropping. Among 11th grade high school students in the Sacramento City Unified School District, electronic cigarette use increased by 50% (8% in 2016-2017 to 12% in 2017-2018), while cigarette use decreased (10% in 2016-2017 to 6% in 2017-2018). Almost half of the 11th grade students reported cigarettes were “very or fairly easy to obtain.” (California Healthy Kids Survey).

4. Restricting sales are important as 75% of stores near Sacramento schools sell flavored tobacco products. In the 2016 Healthy Stores for a Healthy Community survey, 74% of surveyed stores near schools in Sacramento County were found to sell flavored non-cigarette tobacco products. (healthystorehealthycommunity.com/counties/sacramento) The density of tobacco retailers, particularly in neighborhoods surrounding schools, has been associated with increased youth smoking rates. (Henriksen) Youth are more likely to experiment with tobacco products when retailers are located near schools. (McCarthy)

Policies In Other Communities And Counties

Diana Cassady, Professor, Department of Public Health Sciences, UC Davis

1. Cigarettes do not have flavors except menthol. In 2009 the federal Food and Drug Administration banned the sale of flavored cigarettes because of their appeal to children. After 2009, researchers found that there was a reduction in youth smoking, but also a shift among youth smokers to menthol cigarettes. After the ban on flavored cigarettes, the tobacco industry flooded the market with flavored cigarillos and e-cigarettes.

2. Other countries do not allow flavored tobacco products. In response to these new flavored products and their appeal to youth, Brazil was the first country to prohibit flavored tobacco products in 2012. The European Union followed, covering 28 member countries. Turkey, with very high smoking rates, banned the sale of menthol flavored cigarettes in 2015 and will ban mint flavored products in 2020. Twenty-nine countries ban the sale of any type of e-cigarette.

3. Other states have flavored tobacco product regulations. In the United States 182 cities and counties have some form of restriction on the sale of flavored tobacco products, including Chicago, New York City, Boston, and Minneapolis. Many smaller cities in Massachusetts and Minnesota also have adopted regulations on flavored tobacco products.

4. Other California cities and counties have flavored tobacco product regulations including Yolo County. Twenty-five of those local policies have been passed in California as of November 2018 (see attachment). The City of Hayward was the first to regulate the sale of flavored tobacco products in 2014, with more policies passed each year: 11 California cities passed policies in 2018. Closest to Sacramento, the Yolo County Board of Supervisors passed their tobacco product regulation policy in October 2016 to prohibit the sale of flavored electronic cigarettes, menthol, little cigars, smokeless, components and accessories (e.g. blunt wrappers), and without exemptions.

Sacramento County Tobacco Education Program and Tobacco Control Coalition

Danica Peterson, Health Educator, Sacramento County Tobacco Education Program

1. The Sacramento County Tobacco Education Program (TEP) is housed under the Sacramento County Department of Health Services, Public Health Division. The TEP is funded by the California Tobacco Control Program (CTCP), under the California Department of Public Health (CDPH) through a combination of Proposition 99 and 56 tobacco taxes.

2. Focus to support education. The TEP focuses on providing tobacco-related information and education
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3. Focus to support policy and social norm change. Another primary focus is on policy and social norm change. Methods include the pursuit of legislative policies; the pursuit of voluntary policies; providing staffing, training, and support for the local Tobacco Control Coalition (TCC); youth and adult engagement in tobacco control. Importantly, due to its funding source from tobacco taxes, the TEP is not allowed to lobby or openly support any specific legislation. However, they are able to provide information and education on the issues and support to the Tobacco Control Coalition (TCC), whose non Proposition 99/56 funded members are allowed to lobby.

4. The Tobacco Control Coalition (TCC) currently meets 6 times per year, every other month, to discuss tobacco-related issues in the community. The vision of the Coalition is to “transform Sacramento County into a tobacco-free society in the 21st century.” Currently, the Coalition also consists of 4 subcommittees/task-forces: The Equity and Diversity Subcommittee, The Youth and Young Adult (YYA) Subcommittee, the Cessation Taskforce, and the Policy Taskforce.

Health Burden and Economic Costs of Smoking in Sacramento
Total Costs: $790,670,000 in 2009 -> $860 million in 2019
Direct Health Care Costs: $416,692,000 in 2009 -> $491 million in 2019
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References


