POLICY PLAYBOOK FOR E-CIGARETTES

PUBLIC HEALTH LAW CENTER
at Mitchell Hamline School of Law

VAPING PREVENTION RESOURCE

ACKNOWLEDGMENTS

This document is the result of a collaboration between Vaping Prevention Resource and the Public Health Law Center.

Funding provided by the University Cancer Research Fund from the UNC Lineberger Comprehensive Cancer Center

University of North Carolina at Chapel Hill
Lineberger Comprehensive Cancer Center
Kurt M. Ribisl, Ph.D.
Hannah Prentice-Dunn, MPH
Seth M. Noar, Ph.D.
Emily Gvino
Naomi Carbrey
Ashley Vann

Public Health Law Center
Joelle Lester, J.D.
Kerry Cork, J.D., M.A.
Kyra Hill, J.D.
Julie Amajuoyi, J.D.

Vaping Prevention Resource is a leading online destination for vaping prevention media, research, policy, and advocacy. A non-commercial, educational resource for communities, VPR was created by UNC-Chapel Hill researchers working on the front lines of tobacco control at the Lineberger Comprehensive Cancer Center, the Gillings School of Global Public Health, and the Hussman School of Journalism and Media. In addition to the media gallery featuring free, open-access vaping prevention materials to download and use, VPR offers the latest vaping advocacy materials, research, news updates, and policy solutions.

The Public Health Law Center is a public interest legal resource center dedicated to improving health through the power of law and policy, grounded in the belief that everyone deserves to be healthy. Located at the Mitchell Hamline School of Law in Saint Paul, Minnesota, the Center helps local, state, national, tribal, and global leaders promote health by strengthening public policies. For over twenty years, the Center has worked with scientists, public officials, and community leaders to develop, implement, and defend effective public health laws.

PUBLIC HEALTH LAW CENTER
at Mitchell Hamline School of Law

VAPING PREVENTION RESOURCE

The Public Health Law Center provides information and legal technical assistance on issues related to public health. The Center does not provide legal representation or advice. This policy playbook is provided for educational purposes only and should not be considered legal advice. Anyone with questions about the application of the law to specific facts should consider consulting legal counsel familiar with the laws of their jurisdiction.

Updated 12/09/2020

POLICY PLAYBOOK GUIDE

1 KNOW THE FACTS

Introduction: Review the current trends in e-cigarette use, harms related to vaping, e-cigarette products on the market, and federal government action to date. 1-6

Policy basics & elements: Review the Public Health Law Center's basic tips for crafting and enacting a successful policy. 7-9

2 REVIEW THE FOUNDATIONAL POLICIES

Retail licensing: Tobacco retailer licensing is typically one of the first policies communities consider if licensing is not already in place. Jurisdictions that already have licensing can often strengthen and expand these policies to include e-cigarettes. 10-13

Use restrictions: Policies that restrict the use of tobacco products are important initial ways to limit tobacco use and reduce exposure to second-hand smoke. Use restriction policies are common in the U.S. but can be strengthened to include e-cigarette use, and expanded to cover additional areas. 14-17

3 CONSIDER PRICING POLICIES

Pricing policies: Communities may also want to consider policies that regulate the price of e-cigarettes, such as restricting price-discounting or raising excise taxes on e-cigarettes. 18-20

4 REVIEW MORE ADVANCED LOCAL & STATE POLICY OPTIONS

Other policy options: Depending on their jurisdiction's needs, regulatory authority, policy history, and goals, states and local communities may want to consider other strategies to regulate e-cigarettes, including general sales restrictions, restricting the sales of flavored e-cigarettes, and strengthening youth access policies. 21-22

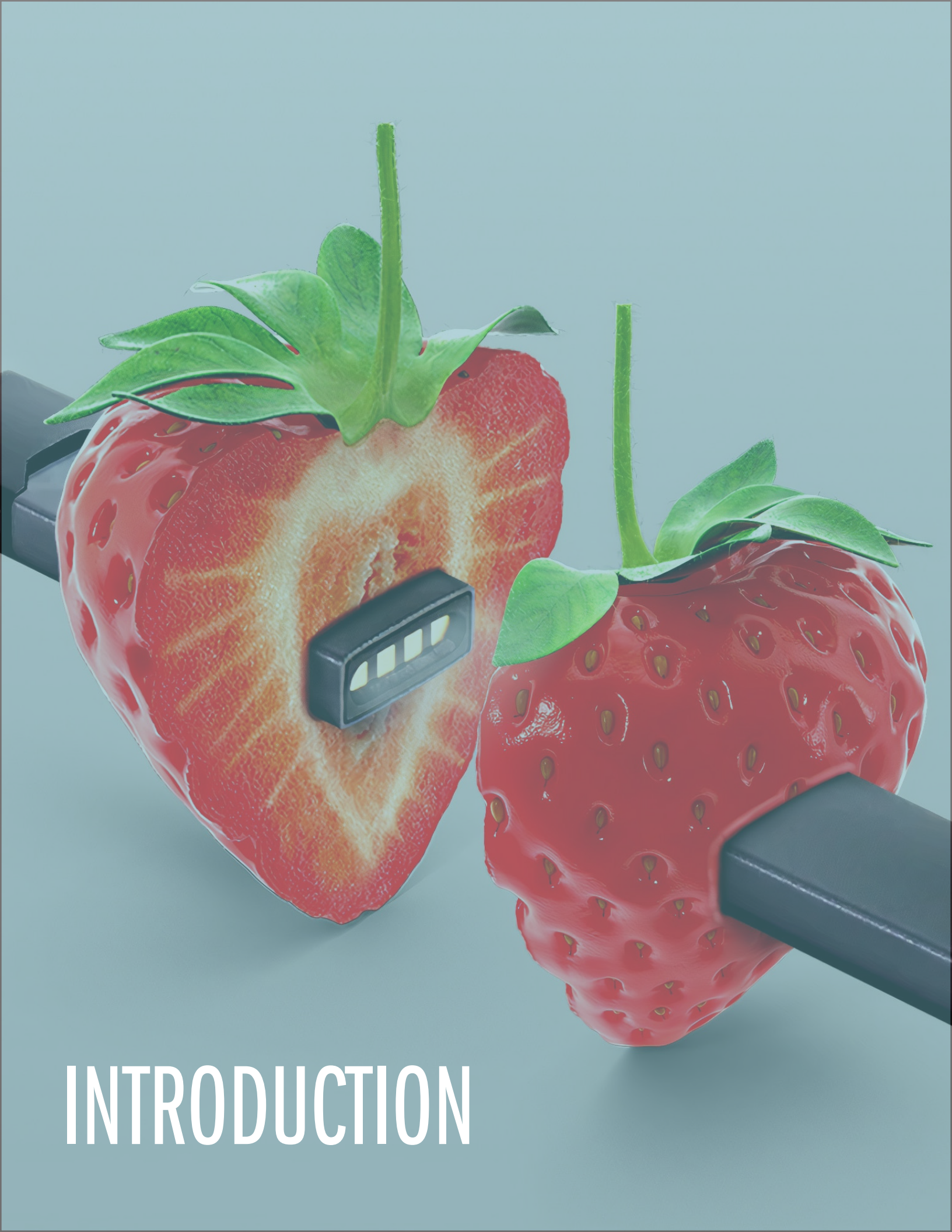
5 COVER YOUR BASES

E-cigarette policy considerations: Review possible legal challenges to e-cigarette policies and how you can anticipate these arguments. 23-25

6 ACCESS ADDITIONAL RESOURCES

Organizations: Refer to partnering organizations who support a wide array of vaping prevention & control activities. 27

Resources: Review specific policy and advocacy resources curated by the Public Health Law Center and Vaping Prevention Resource. 28-30



INTRODUCTION

PURPOSE AND RATIONALE

PURPOSE OF THE POLICY PLAYBOOK

Since e-cigarettes were first introduced to the U.S. market in 2007,[1] the prevalence of vaping has soared, especially among youth and young adults.[2] Addressing the phenomenal growth of the U.S. vaping epidemic requires coordinated and evidence-based policy at local, state, and federal levels. The UNC Lineberger Comprehensive Cancer Center partnered with the Public Health Law Center to create this Policy Playbook as a guide for public health practitioners and educators interested in adopting state and local policies to curb the vaping epidemic.

The Policy Playbook provides policy and advocacy tools to help communities address and prevent the public health harms caused by the use of electronic nicotine delivery system (ENDS) products such as e-cigarettes. For state and local health practitioners and educators, the Policy Playbook offers a framework to assist in deciding on policies and practices to pursue, as well as policy implementation guidelines, case studies, and examples.

NEED FOR E-CIGARETTE REGULATION

In recent years, e-cigarettes have become the tobacco product most commonly used by youth.[3] As of 2020, an estimated 3.6 million U.S. youth currently vape, including one in five high school students and one in twenty middle school students.[4,5] Of these youth, 22.5 percent of high school e-cigarette users vaped daily and 84.7 percent used flavored e-cigarettes. From 2011 to 2019, the prevalence of e-cigarette uptake and use increased rapidly among youth.[6] During this time, the prevalence of lifetime e-cigarette smoking in adolescents rose from 3 to 27 percent, representing a 900 percent increase.[7] In 2018, 43 percent of high schoolers reported ever using e-cigarettes, which was 20 percent higher than the number that reported ever using combustible cigarettes.[8] Research shows that most habitual nicotine product use begins during youth and young adulthood. Among adults who smoke daily, nearly 90 percent began smoking by age 18.[9] The high prevalence of e-cigarette use among youth can lead to continued addiction in young adulthood and contribute to a higher overall prevalence of nicotine and tobacco product use in the U.S. population.

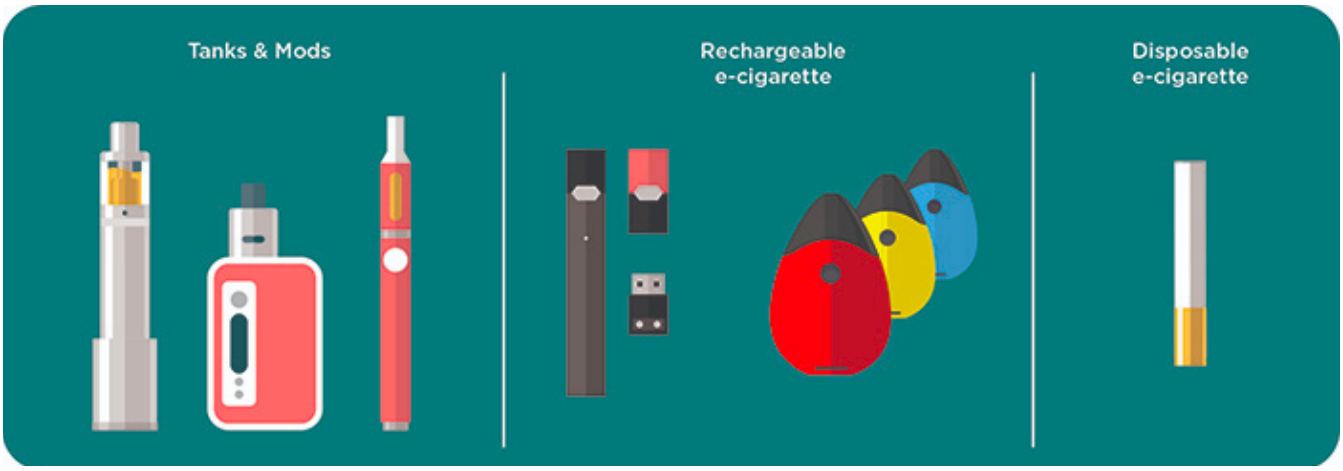
From 2011 to 2019, e-cigarette marketing expenditures and internet advertising skyrocketed. As a result, over 70 percent of youth report exposure to e-cigarette marketing in the past month.[10] The impact of marketing on youth has been significant. For instance, youth who report exposure to e-cigarette marketing are more likely to initiate the use of e-cigarettes.[11] Moreover, youth who recall internet e-cigarette advertisements are more than twice as likely to use e-cigarettes, and those who recall e-cigarette advertisements in retail stores are almost three times more likely to use e-cigarettes.[12,13]

In 2016, out of approximately 10.8 million adult e-cigarette users, those who identify as Native American,[14] LGBTQIA+ individuals, and adults with chronic health conditions were most likely to use e-cigarettes.[15] The prevalence of e-cigarette use is highest among young adults aged 18-24,[16] and use in this age group has increased since 2012.[17] In 2016, approximately 9.8 percent of adults aged 18 to 24 reported e-cigarette use.[18] Among current young adult e-cigarette users aged 18-24, over 40 percent had never been commercial tobacco users until they began using e-cigarettes.[19]

E-CIGARETTE USE & HEALTH RISKS

Various health risks and negative health outcomes are associated with vaping. The nicotine intake from e-cigarettes is comparable to intake from combustible tobacco cigarettes and can cause addiction.[20] Youth are at particular risk of developing nicotine addiction and can suffer related negative long-term impacts, including impaired memory and reduced attention span.[21]

The fine particulate matter emitted in e-cigarette vapor is known to cause cardiovascular and respiratory illnesses and can contain metals such as aluminum, nickel, chromium, and lead.[22] E-cigarette use in adolescents is associated with an increased risk of asthma.[23] In addition, although most of the chemicals used to flavor e-liquids are designated as safe for **oral consumption**, they have not been approved for **inhalation** as aerosols.[24] The e-cigarette flavoring chemical diacetyl has been linked to lung disease,[25] and another additive used to create cinnamon flavoring has been found to damage human cells.[26]



Yet another health risk posed by e-cigarettes is injury from defective battery explosions or accidental exposure to and ingestion of e-liquid.[27] E-liquid ingested or exposed to the eyes or skin can result in vomiting, seizures, lactic acidosis, and anoxic brain injury.[28] Between 2012 and 2015, the rate of child exposure to nicotine liquid increased rapidly and the odds of severe outcomes were 2.6 times higher for children exposed to nicotine liquid than for those exposed to combustible cigarettes.[29]

E-cigarettes are also used to consume marijuana and other drugs. In 2019, a string of cases of e-cigarette or vaping use-associated lung injury (EVALI) were found to be linked to the presence of vitamin E acetate as an additive in some THC e-cigarettes.[30] In the U.S. to date, 2,800 hospitalizations and 68 EVALI-related deaths have been confirmed.[31] The CDC reports that further research is needed to conclude unequivocally that other chemicals in e-cigarettes are not associated with EVALI.[32]

Although some public health experts advocate for e-cigarettes as a harm reduction tool, asserting that e-cigarette aerosol contains fewer toxicants than combustible tobacco cigarettes,[33] other experts disagree. These researchers point to the results of modeling studies that demonstrate that e-cigarettes reduce smoking cessation rates and increase the prevalence of smoking initiation by attracting youth.[34] What remains clear is that e-cigarettes are not risk-free and that further research is needed to determine the long-term health effects of e-cigarettes.[35]

E-CIGARETTE PRODUCTS AND FLAVORS

More than 460 different e-cigarette brands are currently on the market.[36] The first e-cigarettes resembled cigarettes without rechargeable or refillable components, but over time products have evolved to be both reusable and adaptable to a user's preferences in terms of temperature and concentration of aerosol. These features affect the chemical composition and toxicity of the aerosol.[37] Most e-cigarettes consist of four components: a cartridge or reservoir containing e-liquid, a power source (typically a battery), a heating element, and a mouthpiece used to inhale.[38] The basic types of e-cigarette devices include tanks and mods, vape pens, rechargeable, and disposable e-cigarettes, evolving products such as e-cigars and e-pipes, and pod type devices such as JUUL. Although "pod mod" e-cigarettes such as JUUL are the devices most commonly used by youth,[39] fewer than half of parents of middle and high school students can recognize JUUL as a vaping device.[40]

FLAVORED E-CIGARETTES

The prevalence and popularity of flavored e-cigarettes that attract young users are major public health concerns. More than 15,500 e-liquid flavors are on the market today.[41] Youth who use e-cigarettes prefer flavored products[42] and use flavored e-cigarettes more often than adults.[43] Among youth who began using e-cigarettes in 2016

and 2017, over 96 percent used a flavored product the first time they vaped.[44] Over 70 percent of youth report using e-cigarettes because they are available in flavors they like,[45] such as fruit, mint, candy, and dessert flavors.[46] In addition to attracting youth users, the chemicals used to create some e-cigarette flavors, such as diacetyl and acetyl propionyl, may be harmful when aerosolized and inhaled.[47]

Because of these health risks and public health concerns related to flavored e-cigarettes, the U.S. Food and Drug Administration (FDA) issued a ban effective February 2020 of all flavors except tobacco and menthol in cartridge e-cigarettes. However, this ban makes significant exceptions and contains vague language that creates loopholes.[48] Disposable e-cigarettes, open-tank e-cigarettes,[49] and menthol and tobacco flavored products[50] are not covered by the flavor ban. Notably, menthol-flavored JUUL products continue to be available under the ban – products used by nearly two-thirds of high school e-cigarette users.[51] In 2009, the FDA issued a similar ban on flavored combustible cigarettes that allowed for significant exceptions including menthol-flavored products.[52] Although this ban likely led to a reduction in the number of youth cigarette smokers, there were substantial increases in the number of youth who used menthol cigarettes and other tobacco products. These exceptions led to only a 6 percent overall decrease in smoking among youth.[53] Because of similar exceptions in the recent FDA flavor ban related to e-cigarettes, some state and localities have taken further action to restrict the sale of flavored e-cigarettes, discussed on page 20.

> *"FDA has broad authority to prohibit flavors in any tobacco product, as well as to set standards relating to ingredients, additives, and characteristics, including nicotine content."*

EASE OF ACCESS

The ease with which e-cigarettes can be obtained has contributed to the growth of the vaping epidemic in the United States. An estimated 53 percent of all e-cigarettes are sold at convenience stores or in food, drug, and retail outlets, 28 percent online or through other retail channels, and 19 percent at vape shops.[54] The density of tobacco retailers is positively associated with smoking prevalence in an area.[55] Moreover, many youth purchase e-cigarettes from these retail outlets and convenience stores. A 2019 survey found that among the 20 percent of youth JUUL users who reported buying JUUL products themselves, 53.1 percent reported purchasing them at "a gas station or convenience store."[56]

THE FEDERAL GOVERNMENT AND E-CIGARETTES

The 2009 Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) gave the FDA unprecedented authority to regulate tobacco products.[57] While the law initially applied only to cigarettes, cigarette tobacco, roll-your-own tobacco, and smokeless tobacco, the law also gives the FDA the authority to regulate any product made or derived from tobacco that is intended for human consumption. On August 8, 2016, the FDA's final "deeming rule" took effect, which deemed all tobacco products, including e-cigarettes, subject to its authority.[58]

FDA's Regulatory Tools

The FDA has several tools that it can use to regulate e-cigarettes, although to date it has taken only modest measures to regulate these products. Below are a few of the regulatory tools at the FDA's disposal.

Issuing Tobacco Product Standards. The Tobacco Control Act gives the FDA exclusive authority to issue "tobacco product standards," which are regulations affecting the design or safety of a product.[59] The FDA has broad authority to prohibit flavors in any tobacco product and to set standards relating to ingredients, additives, and characteristics, including nicotine content .[60] Congress included one product standard in the law itself that prohibits flavors such as strawberry, grape, orange, clove, cinnamon, pineapple, vanilla, coconut, licorice, cocoa, chocolate, cherry, or coffee in cigarettes.[61] However, this specific product standard exempted menthol and tobacco flavors, leaving products on the market that are disproportionately marketed to, and impact, African American, LGBTQIA+, and Latinx populations, among others.[62] As of today, the FDA has not issued any other tobacco product standards, and the list of prohibited "characterizing flavors" does not apply to e-cigarettes.[63]

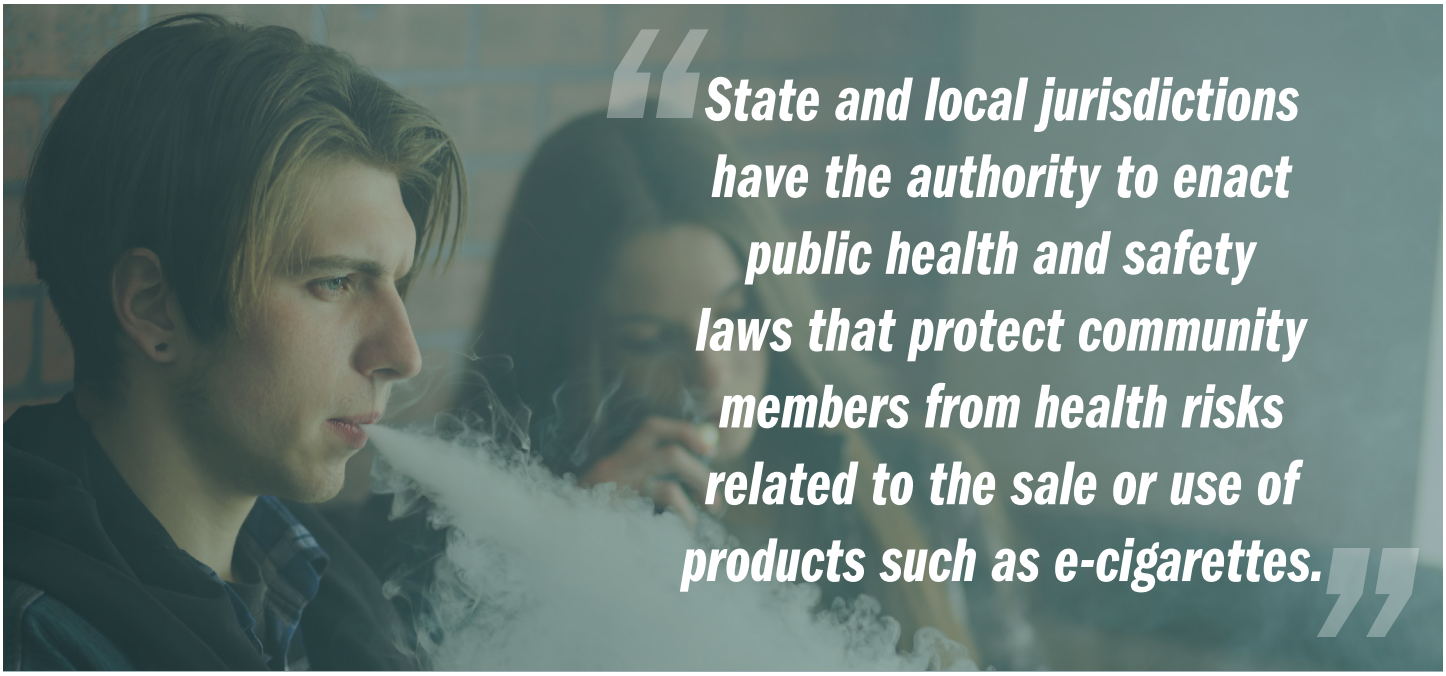
Requiring Warning Labels & Labeling. Beginning on August 10, 2018, e-cigarettes and advertisements for e-cigarettes are required to display the following text: "WARNING: This product contains nicotine. Nicotine is an addictive chemical. "[64] According to the deeming rule, the text should fill a box that is 30 percent of the size of the package and use no less than 12-point type.[65] The Tobacco Control Act preempts (or overrules) state labeling requirements that are different from the federal warning.[66]

Prohibiting "Modified Risk" Claims. The Tobacco Control Act also prohibits manufacturers from making "modified risk" claims without prior authorization from the FDA. "Modfied risk claims" are defined as claims that the product is less harmful than other tobacco products.[67] For modified risk products, the manufacturer must show that marketing its product with modified risk claims would "benefit the health of the population as a whole."[68] Though no e-cigarette has received authorization to market itself as a modified risk product, e-cigarette manufacturers have been marketing their products—both implicitly and explicitly—as presenting less harm to users than combustible products, prompting warning letters from the FDA.[69]

Ensuring Pre-Market Review of New Tobacco Products. The Tobacco Control Act is designed to prevent the introduction of new products—which are defined as those commercially marketed after February 15, 2007—without prior marketing approval from the FDA.[70] Manufacturers must submit applications establishing that their products meet the requirements of one of three separate marketing pathways.[71] Generally speaking, the FDA must determine that the marketing of a new product would be "appropriate for the protection of the public health" before authorizing its sale.[72] As of September 9, 2020, the FDA requires e-cigarette manufacturers to submit applications for marketing authorization. This means that no e-cigarettes currently on the market have received marketing authorization from the FDA. According to the Tobacco Control Act, only products that have submitted applications by the September 9, 2020 deadline are allowed to be on the market. The FDA, however, has chosen to use its enforcement discretion to **not** enforce these provisions against e-cigarette manufacturers who have submitted applications, and thus far has taken few actions against e-cigarette manufacturers whose products remain on the market illegally. After September 9, 2021, the only e-cigarettes on the market should be those that have received affirmative marketing orders from the FDA.

The FDA's Limited Action to Date

Limited Flavored E-cigarette Enforcement Efforts. As most e-cigarettes are "new" Wproducts (entering the market after February 15, 2007), they should have been subject to the FDA's premarket review process.[73] Unfortunately, as the e-cigarette epidemic demonstrates, the FDA allowed these products to remain on the market without regulatory oversight.[74] Only after a lawsuit brought by public health groups and a resulting order by a federal judge, did the



FDA set a deadline by which manufacturers must submit premarket review applications.[75]

Limited Flavored E-cigarette Enforcement Guidance. In light of the FDA's inaction in regulating e-cigarettes, the U.S. experienced a proliferation of flavored products, resulting in the e-cigarette epidemic among youth. In response to this health crisis, many states, public health professionals, and advocates called upon the FDA to remove flavored e-cigarettes from the market. However, when the FDA did release a guidance document describing its intent to remove certain products from the market, the guidance only addressed pod or cartridge-based products (such as JUUL) and exempted menthol flavors entirely.[76] This effectively left all "disposable" products – as well as refillable products – on the market, in addition to many other flavored products that have been shown to lead to youth initiation.

Limited Follow-up on Other Flavored E-cigarette Products. One popular, so-called "disposable" product left out of the FDA's e-cigarette enforcement guidance was "Puff Bar"—a self-contained product that comes in a variety of kid-friendly flavors, including Lychee Ice and O.M.G. (Orange, Mango, Guava). This product, and many of its imitators, became popular after the FDA released its guidance. In July 2020, the FDA issued warning letters to ten companies, including the company doing business as Puff Bar, notifying them that their products lack the required premarket authorization and must be removed from the market.[77] As of October 2020, however, the FDA has taken no follow-up actions against these companies. Moreover, the FDA has tended to use warning letters as its primary mode of enforcement to date,[78] even though it has broad authority to issue civil monetary penalties and no-tobacco sale orders, seize products and even impose criminal penalties.[79]

Role of State and Local Governments

Given the FDA's anemic response to e-cigarette regulation, a growing number of state and local governments, as well as several U.S. territories, have taken steps to restrict the sale, marketing, and use of e-cigarettes to protect the health of users, reduce youth initiation to nicotine and tobacco products, and promote enforcement of smoke-free laws.[80] State and local jurisdictions have the authority to enact public health and safety laws that protect community members from health risks related to the sale or use of products such as e-cigarettes. This authority is well within the government's policymaking powers and represents its legitimate and primary obligation to protect the health and safety of its citizens.[81]

> *"Thus far, the FDA has taken few actions against e-cigarette manufacturers whose products remain on the market illegally."*

Over the last five years, states and territories have passed laws that include e-cigarettes and related electronic smoking devices in smoke-free laws, clean indoor air acts, and other tobacco-related laws. States have also levied taxes on e-cigarettes, added point-of-sale retail requirements (including youth access restrictions), imposed product packaging requirements on e-cigarette and e-liquid products, and required licenses or permits for retail sales of e-cigarettes.[82]

In addition, in light of the 2019 multi-state outbreak of e-cigarette, or vaping, product use-associated lung injury (EVALI), resulting in over 2,800 hospitalizations,[83] several states and tribes have taken temporary or emergency action to ban sales of (typically flavored) e-cigarette products.[84] Unfortunately, short-term state action to address the harms of e-cigarette use is not a substitute for bold, comprehensive, and permanent local and state policy.

POLICY ELEMENTS

POLICY BASICS

COMMON POLICY ELEMENTS

Communities seeking to regulate e-cigarettes need to be clear about the policy's goal and scope, as well as the local government's regulatory authority to enact this policy. Regardless of the type of regulatory measure, an effective policy needs to be specific, well-crafted, and include realistic implementation steps and enforcement mechanisms. Here are some key elements found in such policies:

Findings and Statement of Purpose

Findings are brief statements of facts or statistics that outline the issue, support the need for the policy, and help clarify the policy goal. Regulations involving e-cigarettes typically include timely findings that detail the prevalence of e-cigarette use among youth and young adults (including, where available, community-specific data), and the known health risks of e-cigarette use or vaping (whether nicotine or other substances). Findings also typically explain how the policy is designed to address the problem. In the event of litigation, clear findings and statements of purpose provide the evidentiary basis for the policy and demonstrate the regulatory authority's rationale for adopting specific restrictions.

Statement of Authority

Whether included within the findings or in a separate provision of the law, it is useful to provide a clear, concise, and well-researched statement explaining the local government unit's authority to enact the law. The unit could be a school board, city council, board of health, or other local government entity. Such a statement may help avoid arguments that the local government lacks the authority to pass the law because of preemption, lack of home rule authority, or some other legal reasoning.

Clear Definitions and Concise Language

To avoid confusion about what constitutes an e-cigarette, definitions should explicitly state which tobacco products are covered, yet be broad enough to anticipate and capture future product innovations. This can eliminate ambiguities that may arise when new products that are functionally similar to existing products enter the market, but may not be included under a narrow definition. For example, e-cigarettes physically resembled cigarettes when they were introduced on the market, but are now manufactured in many different forms. Moreover, a definition that covers only products that contain tobacco-derived nicotine may be inadequate and would likely make enforcement difficult. Many cartridges are interchangeable, and e-cigarettes can be used to inhale not only tobacco-derived nicotine but also synthetic nicotine and other substances. **A comprehensive definition should cover all of these variations.** If a jurisdiction chooses to regulate and include in its definition only products that contain nicotine derived from tobacco, it should consider adding language that presumes that all e-cigarette products contain nicotine, absent proof to the contrary. This potentially eases enforcement by placing the burden on the tobacco manufacturer or retailer to prove the e-cigarette does not contain nicotine rather than on the jurisdiction enforcing the policy.

When drafting definitions, be sure to consider the range of products intended, the specific activity to be addressed, the existing laws within the particular jurisdiction, and the political environment. Definitions should be tailored to particular contexts and easy for the average person to understand. For instance, when drafting a sales restriction law, it would be helpful to include language that exempts products approved by the FDA for sale as tobacco cessation aids and that are being marketed and sold for that purpose. However, a similar exemption for a clean indoor air law could be problematic because it may create confusion, leading to enforcement difficulties.

Clear Enforcement/Compliance Check Procedures

Enforcing restrictions on the sale, marketing, pricing, and use of e-cigarettes can be challenging unless clear and practical procedures are established, including a reasonable and equitable compliance check and a penalty and appeals process. It is important to ensure that the proposed penalties are appropriate, equitable, and legal within the particular jurisdiction. Effective enforcement of these policies often includes coordination among different enforcement agencies and consistent procedures throughout a community. States could also use existing consumer protection laws to ensure that the public is protected from false claims made about these products.

Well-Planned Implementation Process

Establish a process for publicizing the policy and educating the community, as well as for receiving, tracking, and following up on complaints. Set a realistic date that the policy will take effect and communicate that date clearly. For example, in the case of a sales restriction policy affecting e-cigarette retailers, it may be helpful to create educational materials for distribution to retailers informing them of the policy's key provisions, explaining how existing inventories may be treated (allowing time for existing inventories to be depleted), and providing them opportunities to ask questions.

COMMON LOCAL AND STATE POLICY OPTIONS

States, tribes, and local governments play a critical role in regulating the sale and use of commercial tobacco products, including e-cigarettes. They have wide latitude, for instance, to license tobacco retailers, adopt clean indoor air laws and smoke-free laws, and establish pricing and taxing policies.[85] The following sections will discuss each of those policy options in turn, with a focus on key elements and considerations.

As with most policies, there are no "one-size-fits-all" solutions when it comes to retail licensing, smoke-free laws, or pricing and taxing policies. The most effective solutions are those that have community buy-in, support, and are tailored to the unique needs of each community.

Drafting Tips
In many cases, existing definitions for "tobacco products" in tobacco control laws need to be broadened to include e-cigarettes. It would also be helpful to include, as part of the definition of an e-cigarette, all component parts and accessories, regardless of whether they are sold together or separately. This may help prevent ambiguities as to what is covered under the e-cigarette definition. Finally, to ensure that inconsistencies or other problems do not occur, consult with a lawyer familiar with the laws of your jurisdiction, or contact the Public Health Law Center.

TOBACCO RETAIL LICENSING

One of the most common ways to regulate e-cigarettes is through tobacco retailer licensing. Jurisdictions often strengthen tobacco licensing policies by including retailer restrictions on e-cigarette marketing, sales, and promotions, as described below. Tobacco retailers such as vape shops and convenience stores are the primary brick-and-mortar marketing venue for e-cigarettes, driving their sales and use. Tobacco control policies that restrict the number of retailers, retailer location, and product pricing can have an impact on sales and significantly decrease youth initiation.[86] This section describes the public health rationale behind placing restrictions on tobacco retailers; presents key elements of tobacco retail licensing laws; and provides a few examples of policies.

PUBLIC HEALTH RATIONALE

In 1998, several large tobacco companies entered into what is known as the "Master Settlement Agreement" (MSA), which placed significant restrictions on tobacco product advertising and most sponsorships, among other requirements.[87] The MSA had few point-of-sale advertising restrictions, prompting tobacco companies to bolster spending at retail locations. Since the 1980s, point-of-sale advertising has been the largest spending category for tobacco industry marketing. The tobacco industry now devotes 90 percent of its marketing budget to point-of-sale advertising and promotions, including price discounts and other incentive programs.[88] Unsurprisingly, given the industry's investment in advertising, point-of-sale tobacco strategies work. They are associated with smoking initiation,[89] particularly among youth,[90] and they increase the likelihood that recent quitters will purchase tobacco products.[91] These strategies are also more common in neighborhoods that tend to be younger, more racially diverse, and lower-income,[92] and at tobacco retailers that are located near schools where teenagers are more likely to shop. More than 40 percent of teenagers live or attend school near a tobacco retailer.[93]

Licensed tobacco retailers represent an important segment of the e-cigarette market, with over 90 percent in some states selling e-cigarettes.[94] The number of dedicated vape shops operating in the U.S. has grown from 3,500 in 2013 to 7,500 to 10,000 in 2018.[95] These outlets generally serve as social lounges in addition to sales outlets.[96] Like traditional tobacco retailers, vape shops tend to be located near schools and universities, and in neighborhoods

Example of E-Cigarette Retailer Licensing Policy

California is just one of 31 states that require retailers to be licensed to sell e-cigarettes. Under the Stop Tobacco Access to Kids Enforcement (STAKE) Act, which includes electronic nicotine devices in its definition of tobacco products, retailers who sell electronic cigarettes need to obtain a state license with the Board of Equalization (BOE). The STAKE Act does not invalidate existing local government ordinances or prohibit the adoption of local government ordinances requiring (for example) a more restrictive legal age to purchase or possess tobacco.

The ACT also limits the number of tobacco licenses to one per 2,000 residents. For example, in unincorporated Sonoma County, that equals approximately 75 licenses. Currently, approximately 130 retailers in unincorporated Sonoma County have state tobacco licenses. To limit the impact on current tobacco retailers, all retailers that hold state tobacco licenses in good standing on May 19, 2016, are waived into the program and receive a license regardless of the density limit. However, no new licenses will be issued until the number of retailers in the unincorporated area of Sonoma county falls below the density limit of 75.

with high tobacco retailer density.[97] Vape shops have learned from the tobacco industry to use price discounts, sampling, and loyalty programs to promote their products.[98] This strategy has proved effective; advertising exposure has been shown to predict e-cigarette use among youth and has been a key factor in reducing concerns among teenagers about the harms and addictiveness of e-cigarettes and in influencing use patterns.[99]

Disproportionately high retailer density is particularly problematic for public health: neighborhoods with high tobacco retailer density also tend to be at higher risk for adverse health outcomes.[100] The tobacco industry has a long history of targeting African American, LGBTQIA+, Latinx, and other marginalized communities[101] and the e-cigarette industry has followed suit.[102] This high retailer density and resulting tobacco use exacerbate existing health disparities and burdens experienced by targeted populations.[103] Communities interested in regulating tobacco retailer locations to improve public health have several options, including regulating the type of retailers that can sell e-cigarettes and where they can be located.

> *"Communities that are interested in regulating tobacco retailer locations to improve public health have several options, including regulating the type of retailers that can sell e-cigarettes and where they can be located."*

LICENSING LAWS & POLICIES

TYPES OF LICENSING LAWS AND POLICIES

Local communities often use licensing and zoning laws to regulate how and where tobacco and e-cigarette retailers do business by requiring that retailers implement certain strategies before a license or permit will be granted or renewed.[104] A tobacco retailer licensing (TRL) law requires all stores that sell tobacco products to obtain a license for the privilege of selling these products. **An effective TRL law should reflect the best public health policy practices, strike a balance between state and federal minimum standards, and impose clear and practical measures for implementation and enforcement by local governments.**

As of 2020, 31 states, the District of Columbia, the Northern Mariana Islands, and the U.S. Virgin Islands require retailers to have a license to sell e-cigarettes.[105] These licensing laws can address a wide range of potential public health strategies. The most common and effective licensing strategies include restricting the types of businesses that sell e-cigarettes, regulating where retailers can be located, capping the number of retailers in defined areas, restricting point-of-sale advertising, and regulating product placement.

Restricting Types of Businesses that Sell E-cigarettes. Licensing laws are commonly used to restrict tobacco and e-cigarette retail locations. For example, some jurisdictions opt to replicate alcoholic beverage sales restrictions and limit e-cigarette sales to specialty shops, which prohibit underage people from entering.[106] Jurisdictions can also prohibit businesses like pharmacies, healthcare institutions, or even educational institutions from selling tobacco products.[107] Jurisdictions with such restrictions have experienced reduced tobacco retail density after enacting those laws,[108] suggesting that even relatively simple policy solutions can have a measurable impact. Moreover, the promotion and sale of tobacco products online, particularly electronic cigarettes, has also increased in recent years due to app-based "digital convenience retailers" like GoPuff and Postmates, despite regulation and voluntary efforts by credit card companies, PayPal, and private shipping companies.[109] TRL ordinances can require a "tobacco retailer" to be located in a fixed location and restrict licensed retailers to those that sell to walk-in customers. Ordinances can also prohibit direct-to-consumer deliveries or shipments of any tobacco product.[110]

Regulating Where Retailers Can be Located. Communities can use licensing laws to restrict how close e-cigarette retailers can be to each other, schools, or other areas frequented by children or young people.[111] These strategies have proven effective in limiting youth access to tobacco retailers. A 2015 study, for example, found that a statewide or county-level 500-foot minimum distance requirement between retailers in North Carolina would remove 1,640 outlets and reduce retailer density by 22 percent.[112] The study also found that a 1,000-foot distance requirement from schools would remove 1,323 tobacco retailers and reduce density by 18 percent.[113] Multiple studies have found even greater reductions when a density policy is combined with a pharmacy ban, showing that a combination of policies can have an outsized impact on tobacco retailer density.[114] Further, sales restrictions based on proximity to schools have shown particularly strong potential for reducing socioeconomic and racial disparities by reducing retailer density in low-income neighborhoods.[115] Importantly, jurisdictions should be wary of the potential that simply imposing a location restriction might cause retailers to congregate more densely in other areas.

Capping Number of Retailers in Defined Areas. Retailer density is not uniform in most jurisdictions due to the intentional targeting of low-income communities and communities of color. This has inspired communities to combat disproportionate density by limiting the number of licenses issued to tobacco retailers.[116] One possible approach is to set a cap on the number of vape shops or similar licenses issued in a specific jurisdiction, and once that number is reached, require prospective retailers to join a waiting list until an existing license becomes available.

To effectively reduce the number of retailers over time, communities could consider setting an absolute cap on issuing new licenses when a retailer closes, does not renew a license, retires the license, or enforcement action revokes a license. Policies can also lower that cap over time. For instance, a policy could allow only two new retailers for every three retailers that did not renew or that had their licenses revoked. Over a large geographic area, however, a cap alone may not be effective in reducing disproportionate density in targeted neighborhoods. San Francisco, for example, addressed this problem by breaking the city into 11 districts and limiting the number of retailers to 45 within each district.[117] Cities such as Philadelphia have elected to limit the number of retailers in each of 18 districts to no more than one tobacco retailer per 1,000 residents, meaning the cap will change depending on the population by district.[118] Designing density restrictions requires some groundwork, including population assessments, studies of existing retailers, and retailer education.

Restricting Point-of-Sale Advertising. A more challenging policy option communities might consider – in consultation with legal counsel – is to set limits on point-of-sale advertising to combat its effectiveness, particularly on youth. For example, a TRL ordinance could prohibit retailers from honoring or redeeming coupons, multi-pack discounts, or any other type of price adjustment that would allow a customer to purchase a product at less than full retail price.[119] A jurisdiction could also restrict window sign space to no more than 30 percent, limit the type of displays the stores can use (such as outdoor sandwich board-style ads), or prohibit advertisements within a certain distance of schools or playgrounds.[120] Carefully review any restrictions or limitations on advertisements and consult with legal counsel to avoid potential constitutional challenges (discussed on page 23).

Regulating Product Placement. Tobacco products and e-cigarettes are always located in a very visible place in a convenience store because product placement sells products. So-called "power walls" display products intentionally, with companies competing to get their products placed prominently.[121] This is because product displays influence youth purchase attempts, encourage impulse purchases, and undermine cessation efforts.[122] While other countries have been able to prohibit these displays, federal law and the First Amendment limit the restrictions state and local governments can place on displays in the U.S.[123]

However, localities can still restrict product placement. For example, although the Tobacco Control Act prohibits self-service displays in most retail locations, many jurisdictions prohibit self-service access to tobacco products, requiring the products to be behind a counter and a clerk to assist in all retail locations.[124] Other avenues are possible but should involve careful consideration and consultation with legal counsel.

The Public Health Law Center has worked with several jurisdictions, including California and Minnesota, to develop "model" policies that contain sample language, enforcement provisions, and additional explanatory text.

USE RESTRICTIONS

Policies that restrict the use of tobacco products in public areas and workplaces are an important policy step for communities looking to limit tobacco use and reduce exposure to second-hand smoke. Use restriction policies are common in the United States, but they can be strengthened to include e-cigarette use and expanded to cover other areas.

Comprehensive smoke-free laws are supported by strong, well-established scientific evidence on the toxicity and significant negative health impacts of secondhand tobacco smoke.[125] Exposure to secondhand smoke significantly increases the risk of stroke, coronary heart disease, cancer, and respiratory conditions for adults as well as children, and kills more than 400 infants every year.[126] In the United States, secondhand smoke exposure causes more than 41,000 deaths among nonsmoking adults and an estimated $5.6 million in lost productivity each year.[127] As a result, over 60 percent of the U.S. population is covered by local and state smoke-free laws that prohibit smoking in workplaces, including restaurants and bars.[128] Use restrictions for e-cigarettes can build upon these social norms and policies.

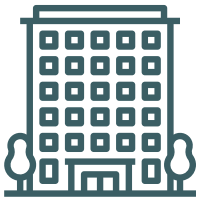
PUBLIC HEALTH RATIONALE

Current evidence suggests that exposure to e-cigarette aerosol may pose significant negative health risks as well.[129] Research has found at least twelve chemicals—including formaldehyde, acetaldehyde, lead, nickel, chromium, arsenic, and toluene—in e-cigarette aerosol are known to cause cancer, birth defects, or other reproductive harm.[130] Moreover, e-cigarette aerosol contains varying concentrations of particles and chemicals, with some studies finding particle sizes and nicotine concentrations similar to, or even exceeding, conventional cigarette smoke.[131]

In addition to the potential negative health impact of e-cigarette aerosol, failure to include e-cigarettes in smoke-free laws or policies can undermine the intent of smoke-free laws and promote an environment that discourages smoking cessation. Permitting e-cigarette use or vaping where smoking is prohibited can weaken smoke-free policies and complicate enforcement efforts. This section describes a variety of settings where e-cigarette use is often prohibited or restricted to protect public health: public places, workplaces, schools, and multi-unit housing. It also discusses other venues where e-cigarettes are sometimes banned, such as outdoor areas.

Sample Language
"Smoking" Definition: "Smoking" means inhaling, exhaling, burning, or carrying any lighted, heated, or ignited cigar, cigarette, or pipe, or any other lighted, heated, or activated tobacco, nicotine, cannabis, or plant product intended for inhalation, including hookah and marijuana, whether natural or synthetic. "Smoking" also means using an electronic smoking device.

PUBLIC PLACES AND WORKPLACES



At least 17 states have smoke-free laws that prohibit e-cigarette use where smoking is prohibited, which typically includes public places and workplaces, such as restaurants and bars.[132] Many local jurisdictions also prohibit e-cigarette use in these areas.

Smoke-free/vape-free policies for public places and workplaces should contain all the elements of a good policy described in "Getting Started" above, including relevant definitions for the venues or settings where e-cigarette use is to be prohibited. States and localities with smoke-free policies that do not include e-cigarette use might want to consider modifying their policies by revising the definitions of "smoking" or "tobacco product" to encompass e-cigarette use and products. Enforcement and penalties vary by jurisdiction but typically include sanctions similar to those for smoke-free policy violations.

Schools

Another important venue for regulating e-cigarette use is the school setting. Given the high prevalence of e-cigarette use among youth and growing awareness of the health risks associated with vaping, many schools are developing policies addressing e-cigarette use. More teenagers use e-cigarettes than other forms of tobacco products,[133] and youth spend a substantial portion of their waking hours at school. Therefore, educational institutions are in a unique position to reduce the problem of e-cigarette use by young people. Research suggests that school policies prohibiting tobacco product use, when consistently enforced, significantly lower teen tobacco use rates.[134]

When enforcing these policies, schools may want to consider alternative enforcement measures other than suspension and expulsion, which disproportionately affect students of color.[135] Effective solutions to school policy violations focus on helping youth succeed. In light of evidence establishing the targeted marketing of e-cigarettes to youth,[136] the science of addiction, and the long-term consequences associated with punitive tactics such as expulsion and suspension, these measures may be ineffective and counterproductive. Schools could consider alternative therapeutic interventions, such as offering tobacco education programs, community service, and cessation resources to help treat the underlying problem.The Public Health Law Center has developed a commercial tobacco-free K-12 school model policy, which contains sample language, enforcement provisions, and explanatory text.

Outdoor Places

States and local jurisdictions increasingly include e-cigarette use in their outdoor smoke-free policies that cover areas such as parks, playgrounds, beaches, sidewalks, and other recreational areas and community spaces. Schools, hospitals, and other employers are also adopting smoke-free campus policies, which extend to all outside grounds, such as parking lots, and property – whether owned, leased, or rented. Many campus-wide smoke-free policies include business vehicles. Also, many of these smoke-free policies are being expanded to prohibit e-cigarette use.

Smoke-free Outdoor Public Places. Including e-cigarette use in any smoke-free policy furthers the overall goal of smoke-free policies, whether indoors or outdoors. Outdoor smoke-free laws are typically enacted by city councils, county boards of commissioners, and local boards of health, which exercise their common authority to regulate smoking on public property. Often these laws are extensions of, or amendments to, indoor smoke-free policies.

***Smoke-free Campuses* and Related Settings.** A growing number of colleges, universities, hospitals, and other employers have adopted smoke- or tobacco-free policies, and the majority of these campus smoke-free policies encompass e-cigarette use. Smoke- and vape-free policies in these settings can help reduce the prevalence of tobacco and e-cigarette use among young people and protect those who learn, live, work, and gather in these settings from the health risks of secondhand smoke and e-cigarette aerosol exposure.

Possible Challenges

One challenge that arises with smoke-free policies – particularly those covering outdoor areas – is how to enforce the policies. Effective education about the policy can result in compliance and measurable behavior changes. For example, an Indiana University study found that a campus-wide smoke-free policy that was lightly enforced significantly reduced students' smoking during a two-year period and changed students' attitudes toward smoking regulations.[137] According to one of the study's authors, the positive changes observed in Indiana University despite the lax enforcement "may be attributable to increased awareness of the policy due to signage, media coverage, and a campus-bus completely wrapped with anti-tobacco messaging."[138] This study suggests that the most important element of any smoke-free policy is education that increases a community's awareness of the policy.

Very few outdoor smoke- and vape-free policies have been legally challenged. In most cases, courts have upheld local laws prohibiting smoking in outdoor areas on the grounds that such laws (1) are within the authority of local governments to protect public health, safety, and welfare; and (2) are not preempted (or superseded) by existing statewide smoke-free laws.[139] If statewide smoke-free laws do exist, they typically regulate smoking in enclosed or indoor areas only and rarely address outdoor smoking.

MULTI-UNIT HOUSING

Indoor air experts and health authorities, including the U.S. Surgeon General and the American Society of Heating Refrigerating and Air Conditioning Engineers, all support inclusion of e-cigarettes in smoking restrictions.[140] For tenants and owners of multi-unit housing, such as apartments and condominiums, tobacco and e-cigarette smoke infiltration from neighboring units can pose a risk to the health of others in the building. As a result, many local governments, housing authorities, and property owners have taken steps to prevent or eliminate secondhand smoke and provide housing that is 100 percent smoke-free. This section briefly describes policy options local governments, property owners, and landlords can take, provides links to sample language, discusses enforcement provisions and challenges, and describes a sample smoke-free housing policy.

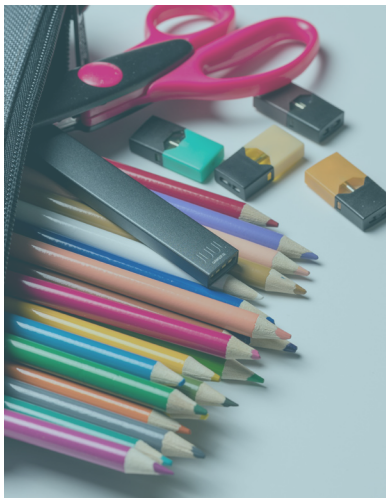
Local Ordinance or Multi-Unit Housing Policy. A smoke-free policy for multi-unit housing developments benefits tenants and residents, as well as property owners and landlords. Studies have shown that tobacco smoke in any form exposes users and bystanders to serious health risks, including lung cancer and cardiac disease in nonsmokers, and is related to severe asthma attacks, respiratory infections, sinus infections, sudden infant death syndrome, and other cardiovascular and pulmonary diseases.[141] As noted previously, exposure to e-cigarette smoke also poses health risks.[142] More than half of multi-unit housing residents in the U.S. support smoke-free building policies,[143] and smoke-free housing policies can also save landlords and property owners money by significantly reducing the costs of cleaning and repair.[144]

Example of Outdoor No-Vaping Policy
Davis, California expanded its smoke-free outdoor ordinance to encompass the city's outdoor spaces, including parks and recreational areas. Importantly, the updated ordinance employs a comprehensive definition of "smoking" that encompasses not only tobacco, but also "plant, weed or other combustible substance" in any manner or form, and the use of an e-cigarette. The Davis ordinance prohibits smoking (defined to encompass e-cigarette use) in various indoor and outdoor spaces, including: enclosed public spaces; public parks and greenbelts; restaurants and bars, including outdoor dining; public events; and within 20 feet of any area in which smoking is prohibited.

> *Effective education around and awareness of the policy can result in compliance and measurable behavior changes.*

The use of cigarettes and other combustible tobacco products is a leading cause of residential building fires,[145] and the use of e-cigarettes does not eliminate the risk of fire. In fact, the lithium-ion batteries in many e-cigarettes are prone to explosion, which can cause both bodily injury and fire damage.[146] E-cigarette liquid also presents the hazard of possible ingestion by pets or children. Yet another benefit for property owners considering adopting a smoke-free multi-unit housing policy is the likelihood of reduced building maintenance costs because cleaning and replacement expenses are significantly higher in units with tenants who smoke or vape.

Drafting a Smoke-free Multi-Unit Housing Policy. Local governments and individual property owners and landlords can all adopt smoke-free housing policies that include e-cigarettes. An effective smoke-free housing policy should include an introduction that explains the policy's purpose; clearly defined terms; descriptions of all who must comply (such as residents, guests, and business visitors); and detailed implementation and enforcement information.[147]



The Public Health Law Center has worked with many jurisdictions, including California and Tribal communities, to develop "model" smoke-free multi-unit housing policies that contain sample language, enforcement provisions, and additional information describing the rationale for certain provisions, as well as options for customizing the language.

Enforcement provisions can vary depending on whether policies are in an ordinance or adopted by landlords or building owners. An ordinance, for example, could contain a provision requiring all multi-unit residential leases to incorporate new lease terms restricting smoking. A jurisdiction could then take enforcement action against the property owner or landlord for violating the ordinance.[148] On the other hand, a voluntary measure adopted by a landlord or building association could impose smoking restrictions on tenants and residents through lease addenda or similar building policies. Finally, existing legal mechanisms can provide individual tenants some private remedies when they are exposed to secondhand smoke or aerosol in their rental units.[149]

Challenges

Enforcing restrictions on smoking or vaping in multi-unit housing policies should be approached carefully and with health equity in mind. Housing is an important basic need and determinant of health, making the typical remedies in the context of smoke-free policies (e.g., asking a non-compliant person to leave a particular area) potentially unfair and unfeasible. Further, criminal and monetary penalties can carry significant risks of discriminatory enforcement, financial hardship, and housing instability for residents.[150] Thus, entities drafting enforcement provisions in their smoke-free policies should consider community education, engagement, and buy-in, as well as providing information about and access to free cessation support,[151] before turning to eviction as a remedy.[152]

Example of Multi-Unit Housing Smoke-free/No Vaping Policy
Contra Costa, California, for example, adopted a Secondhand Smoke Protections Ordinance that prohibits the use of e-cigarette use in multi-unit housing in the county. Contra Costa's ordinance bans the smoking of tobacco products, including electronic smoking devices (e.g., electronic cigarettes, vape pens, Juuls), as well as marijuana, in all multi-unit housing with two or more units, including balconies, decks, and carports. The requirement applies to new and renewed leases as of July 1, 2018. The ordinance also covers areas within 20 feet of doors, windows, ducts, and air ventilation systems of multi-unit housing.

PRICING POLICIES

States and local communities may also want to consider implementing policies that raise the price of tobacco products, including e-cigarettes. This can include levying taxes on e-cigarettes or adopting policies that limit or prohibit the price-discounting of e-cigarettes.

Policies that raise the price of commercial tobacco products, including e-cigarettes, are highly effective in reducing tobacco initiation and use and in encouraging cessation, especially among price-sensitive consumers such as youth.[153] High commercial tobacco prices provide a financial incentive for smokers to quit, discourage young people from starting to smoke, and generate revenue that can help fund tobacco control efforts. These policies can be implemented at the local, state, or federal levels.

PRICE DISCOUNTING

Although tobacco taxation, discussed below, is the most common way to increase the cost of tobacco products, the tobacco industry's price discounting strategies undermine its effect. Tobacco companies spend billions of dollars annually to lower the cost of their products through various price discounting strategies, including coupons, cents- or dollars-off promotions, buy-one-get-one-free deals, and multi-pack offers (e.g., two-for-one pricing). These promotions are often marketed and the products are redeemed at the point-of-sale. Tobacco companies reportedly spend over 70 percent of their cigarette marketing expenditure on price-discounts.[154] Local governments have several non-tax options available to counter these industry price discounting schemes, including:

Establishing minimum prices for commercial tobacco products, including e-cigarettes: A growing number of jurisdictions have established minimum prices for commercial tobacco products, such as cigarettes and cigars. Given the price-sensitivity of young people, setting minimum price policies for e-cigarettes could yield significant public health gains in reducing youth initiation and use. A retailer would thus be unable to sell products below the established minimum price. This type of policy could be crafted so the product price increases over time, either by a fixed amount annually or by tying the increase to inflation. A minimum price law for e-cigarettes could also include a prohibition on price discounts.

Prohibiting price discounts for commercial tobacco products: To keep the price of commercial tobacco products, including e-cigarettes, high and reduce consumption, state and local governments could explicitly prohibit price discounting. Such policies could prohibit all or some forms of price discounting, including the redemption of coupons, cents- or dollars-off promotions, buy-one-get-one-free deals, and multi-pack offers. For more information on these strategies, see Death on a Discount: Regulating Tobacco Product Pricing.

TAXATION

The most common pricing strategy to combat tobacco use is to raise state cigarette excise taxes. In fact, increasing the price of e-cigarettes by 10 percent has been shown to lead to a 10 to 18 percent reduction in demand or consumption of e-cigarettes – a higher price elasticity compared to combustible cigarettes. Increasing the price of tobacco products has the greatest impact on youth, who are particularly price-sensitive.[155]

As a result, states and the federal government often use taxation to decrease tobacco use and generate revenue.[156] As e-cigarette use has increased, particularly among youth, states and localities have begun to adopt e-cigarette-specific taxes. This section will describe the regulatory landscape for e-cigarette taxes, provide links to sample language, discuss key policy considerations, and provide brief examples of state e-cigarette tax policies.

State Action. Taxation is an area of commercial tobacco regulation in which the FDA has no regulatory authority, and Congress has not acted to tax e-cigarettes at the federal level. Therefore, e-cigarette taxation to date has occurred at the state and local level.[157] Because every state's tax code is different, communities and policymakers seeking to tax e-cigarettes should work with an attorney familiar with their jurisdiction's tax code.

Local jurisdictions may have the authority to impose their own taxes, although their ability to do this will likely depend on the availability of resources to administer and enforce a taxation program. When developing tax policies applicable to e-cigarettes, local jurisdictions should consider which parts of the device and its components should be taxed, where a tax should be levied, how the tax should be structured, as well as possible enforcement obstacles.

Taxing Specific Parts of E-cigarette Products. E-cigarettes and their component parts may be subject to taxes differently, depending on how they are sold or their functionality. Some jurisdictions may tax e-liquid that is sold in nicotine cartridges that cannot be removed but may not tax a device that is sold separately from the cartridge. For example, Minnesota adopted an e-cigarette tax in 2013, which includes nicotine solution products but excludes reusable or refillable devices sold separately from starter kits, as well as non-nicotine cartridges or e-juice.[158] North Carolina, meanwhile, taxes "vapor products" at a rate of $0.05 per fluid milliliter of consumable product.[159]

In taxing e-cigarette products and their component parts, policymakers should consider including all e-liquid and parts of the device necessary for its operation in the tax base. Such an approach could exempt accessories, such as lanyards or carrying cases, as well as products that have a universal application, such as batteries.[160]

Where to Levy the Tax. Another important policy consideration is where a tax should be levied. With cigarettes, the product is sold to the consumer in a form identical to that passed on by the distributor or wholesaler. Vape shops, however, often mix e-liquid at the retail level, creating a different, more valuable product. One possible approach is to require retail vape shops that mix product on-site to obtain a special

Example of E-Cigarette Pricing Policy
A growing number of local jurisdictions are implementing pricing policies that encompass e-cigarettes or extending existing policies to e-cigarettes. In 2019, Benton County, Minnesota, for example, updated their tobacco policy to, among other things, prohibit price promotion and coupon redemption. This policy extends to all commercial tobacco products, including e-cigarettes.

retail license, or perhaps even define the shops as "manufacturers." The feasibility of this approach will be jurisdiction-specific and likely depend on factors such as whether there is a statewide licensing system and whether an e-cigarette tax can be integrated into the existing system or whether the tax code needs to be updated to incorporate new products.

How to Structure the Tax. Most jurisdictions that have enacted e-cigarette taxes have either opted to impose a specific tax on the volume of e-liquid or the amount of nicotine in a product, or they have opted to adopt an "ad valorem tax," which taxes the final product at a percentage of the assessed value of the item.[161] Ideally, an e-cigarette tax would be on parity with other tobacco products to avoid unintentionally influencing marketing and use patterns.[162]

In the context of e-cigarettes, an ad valorem tax could minimize the potential negative effects of a volume-based tax, which might incentivize the sale of products separately, or result in higher nicotine concentrations, although a nicotine concentration-based specific tax might also eliminate those concerns.[163] An ad valorem tax also has the additional benefit of inherently including an inflation adjustment, as well as potentially being easier to integrate into an existing tax scheme.[164]

Possible Enforcement Obstacles. Due to the unique, jurisdiction-specific nature of tax collection and enforcement, it is important to seek input from those who are charged with implementing and enforcing any proposed tax policy. If an e-cigarette tax is incorporated into existing tobacco-product tax laws, the implementation and enforcement are likely to be much easier than it would be if a completely new tax scheme is created.

Examples of E-Cigarette Pricing Strategies
Minnesota taxes e-cigarettes at a rate of 95 percent of the wholesale price of the taxed products. This percentage also applies to chewing tobacco, snuff, and non-premium cigars. In Massachusetts, electronic nicotine delivery systems are taxed at a rate of 75 percent of the wholesale price, though this is not the same across different products. While concentration based nicotine taxes are rare, the Governor of the State of California recently proposed a new e-cigarette tax that would tax e-cigarettes at a rate of $1 for every 20 milligrams of nicotine—this would be in addition to the existing ad valorem tax already placed on tobacco products in the state.

OTHER LOCAL & STATE POLICY OPTIONS

In addition to the policies described earlier, states and local jurisdictions may want to consider other strategies to regulate e-cigarettes, depending on their community's goals, resources, tobacco control history, stakeholders, political will and support, state preemption, and other considerations.[165]

SALES RESTRICTIONS

Restricting the sales of commercial tobacco products, including electronic cigarettes, is an effective way to limit youth access, use, and initiation to these products. Sales restrictions may be included as part of a broader licensing structure or, where a licensing scheme is not feasible, as stand-alone policies. Common ways to restrict tobacco sales are (1) to restrict the sales of some classes of tobacco products, such as flavored e-cigarettes, which are known to be very popular among youth; and (2) to establish a minimum legal sales age for tobacco products.

Flavored Tobacco

Numerous studies indicate that flavors in e-cigarettes make them more appealing to young people.[166] Most youth and young adults who use e-cigarettes report using a flavored product and many claim they were drawn to e-cigarettes because "they come in flavors I like."[167] The thousands of appealing flavors in e-cigarettes undoubtedly have contributed to the epidemic use of these products among youth. Thus, restricting the sales of flavored e-cigarettes would likely offer substantial public health benefits in reducing e-cigarette initiation and use.

The federal government's limited regulation of e-cigarettes offers state and local governments an opportunity to close existing loopholes. As mentioned above, while the Family Smoking Prevention and Tobacco Control Act prohibited the sale of flavored cigarettes, this flavor ban **did not extend to menthol-flavored cigarettes or other non-cigarette tobacco products, such as cigars and e-cigarettes.**

In early 2020, in the wake of alarming reports of vaping-related lung injury, the U.S. Food and Drug Administration enacted a minimal and temporary measure to restrict the sales of e-cigarettes: the agency issued guidance prohibiting the sales of pod- or cartridge-based e-cigarettes that are not flavored with menthol or tobacco. This measure is minimal because it does not include all e-cigarettes, other tobacco products, or all flavors. It is also temporary because the prohibited products may be readmitted into the market following the FDA's premarket review process.

State and local governments are increasingly acting to close existing loopholes related to the regulation of sales of flavored tobacco products, including e-cigarettes. In September 2020, for example, California became the second state following Massachusetts to pass a fairly comprehensive prohibition (including e-cigarettes and menthol-flavored cigarettes) on the sales of flavored tobacco products. Many local jurisdictions have also enacted similar measures.

Tobacco 21 Policies

Policies that raise the minimum legal sales age ("MLSA") of tobacco products are also effective in reducing youth tobacco initiation. National data indicates that 95 percent of adults who smoke begin smoking before they turn 21.[168] Moreover, the time between ages 18 and 20 is a critical period when many adults who smoke move from experimental smoking to regular, daily use.[169] In 2015, the Institute of Medicine (now the National Academy of Medicine) concluded that raising the

MLSA for tobacco products nationwide would reduce tobacco initiation, particularly among adolescents aged 15 to 17, improve health across the lifespan, save lives, and over time, lead to a 12 percent decrease in smoking prevalence.[170]

In December 2019, Congress passed amendments to the Tobacco Control Act, which raised the minimum legal sales age for tobacco products from 18 to 21. **Despite this law, states and local jurisdictions with minimum legal sales ages under 21 should still consider amending their laws.** Since all retailers are subject to the federal law, alignment with the federal law would provide clarity for retailers trying to comply with the law and ease enforcement for state and local authorities. Moreover, funding for states and U.S. territories from the Substance Abuse and Mental Health Services Administration ("SAMHSA") under the Synar Amendments will be tied to the new federal legal sales age of 21. Finally, it is important to note that the federal law merely sets a floor, not a ceiling; states and local jurisdictions remain free to raise their minimum legal sale age beyond 21.

"Restricting the sales of commercial tobacco products, including electronic cigarettes, is an effective way to limit youth access, use, and initiation to these products."

POLICY CONSIDERATIONS

State and local governments – where not preempted by the state – generally have the authority to pass, implement, and enforce laws that regulate the sale of tobacco products, including e-cigarettes, and they can do so in ways that address local concerns. Still, due to the tobacco industry's interest in protecting its profits, even the most carefully drafted e-cigarette regulation cannot avoid all risk of legal challenges.

POSSIBLE LEGAL CHALLENGES TO E-CIGARETTE POLICIES

Communities considering measures to regulate e-cigarettes should ensure that policies are drafted carefully and that they are aware of potential legal issues. This section describes several common claims brought by the industry: a jurisdiction's alleged lack of local authority to pass the policy, its alleged violation of the "takings" clause of the Fifth Amendment of the U.S. Constitution, and its alleged infringement of the First Amendment's free speech protections.

Authority & Preemption

Any governmental unit seeking to regulate e-cigarettes should first ensure that it has the authority to enact the regulation. While states have the authority to pass regulations restricting or prohibiting commercial tobacco sales or use, **a local government's authority depends largely upon the authority a state has reserved for itself and what it has delegated to local governments through special legislation, home rule charters or similar laws.** Even where local legislative authority generally exists, preemption may bar local legislation on a particular issue. Preemption occurs when a higher level of government (e.g., federal or state) eliminates or limits the authority of a lower level of government (e.g., state or local) to regulate a certain issue. A local government wishing to implement any e-cigarette regulation should investigate its state's tobacco regulatory scheme to ensure that the local government is not preempted from enacting tobacco or e-cigarette regulations. For more on the doctrine of preemption and local authority, please see the Public Health Law Center's resources.

Example of Legal Challenges Based on Preemption
As flavored products and e-cigarette sales restrictions become more common, the tobacco industry has raised federal preemption-based arguments in its legal challenges. Recently, the city of Los Angeles's flavored product ordinance faced two legal challenges from the tobacco industry. The industry plaintiffs argued that because Los Angeles's ordinance prohibited the sale of flavored products, which necessarily involves placing restrictions on the products' ingredients and additives, the ordinance was preempted by the Tobacco Control Act. The federal district court judge dismissed both cases, finding that the ordinance imposed a sales restriction, not a tobacco product standard. Because the ability of state and local governments to impose sales restrictions on certain products is expressly preserved in the Tobacco Control Act, the court ruled that the ordinance is not preempted. R.J. Reynolds appealed the ruling to the Ninth Circuit Court of Appeals.

"Takings" Under the Fifth Amendment of the U.S. Constitution

The Fifth Amendment of the U.S. Constitution states, in part: "[N]or shall private property be taken for public use, without just compensation."[171] This is commonly referred to as the "Takings Clause." There are two ways the government can take property under the Fifth Amendment: (1) a possessory taking (which involves physical occupation, as in eminent domain) and (2) a "regulatory" taking.[172] A regulatory taking occurs when a law impedes a property owner's investment so significantly that it amounts to a "taking" of the property.[173]

E-cigarette manufacturers and vendors may argue that because these products make up a substantial portion of their sales, any state or local regulation that prohibits their sale constitutes a "taking." To determine whether or not the law constitutes a taking requires a fact-specific analysis of the nature of the action balanced against the interests involved.[174] While a local or state law restricting the sale of e-cigarettes might have some economic impact on vendors, it would still allow for a substantial volume of other economic activity, such as the freeing up of space to sell other products.[175] Further, the analytical balancing test would require weighing the economic burden on the industry in light of the public health nature of the action and the social benefit of reducing youth use rates of e-cigarettes. Given existing legal precedent, it is likely that the government's interest in the common good would outweigh the economic impact on the industry.

First Amendment Challenges

Although the Tobacco Control Act allows states and localities to place some restrictions on tobacco marketing, the First Amendment still protects speech by tobacco companies, thus acting as a limitation on the FDA's authority over marketing and advertising restrictions.[176] The First Amendment has been interpreted to protect a broad range of spoken and written communication, as well as expressive conduct.

Examples of Legal Challenges Based on First Amendment Claims
First Amendment claims brought by the tobacco industry are common. In fact, the tobacco industry has been fighting the Tobacco Control Act's graphic warning labels requirement (applicable to cigarette packages and advertisements) since shortly after it was passed. In 2009, six manufacturers and retailers challenged the graphic warning label requirement under the Tobacco Control Act in Discount Tobacco City & Lottery, Inc. v. United States, and two years later, the industry challenged the first iteration of the graphic warning rule issued by the FDA. The graphic warning requirement in the Act was upheld by the Sixth Circuit in Discount Tobacco, but the rule itself was overturned by the D.C. Circuit Court of Appeals in 2012. Eight years later, after being successfully sued by public health groups for its long delay, the FDA issued a second iteration of the graphic warning rule. This rule was also challenged in two separate industry-led lawsuits, which are being litigated in district courts as this publication goes to press: R.J. Reynolds Tobacco Company et al. v. U.S. Food and Drug Administration et al., No. 6:20-cv-00176 (E.D. Tex. Apr 03, 2020) and Philip Morris USA Inc. and Sherman Group Holdings, LLC v. U.S. Food and Drug Administration et al., No. 1:20-cv-01181 (D.D.C. May 06, 2020).

"Commercial speech" is one category of speech protected by the First Amendment.[177] Commercial speech includes advertising, banners, logos, etc., and can include expressive conduct, such as how products are displayed in a store window.[178] The level of "protection" certain speech is afforded depends on the type of speech at issue, and the limitations the government places on that speech.[179] First Amendment protections are also implicated when the government "compels" speech—e.g. when it requires a warning label on a package.[180]

FUTURE POSSIBLE CHALLENGES

E-cigarettes are relatively new products in comparison to combustible cigarettes. The e-cigarette industry and its spin-off products and accessories continue to evolve, while promotional innovations, including the phenomenal impact of social media, exert a huge impact on the market. Although the FDA's regulation of e-cigarettes is currently minimal, the federal regulatory landscape may change in the future.

Policymakers and regulators need to remain alert to all product, marketing, and regulatory actions, craft policies that can accommodate foreseeable changes, and update policies as necessary and appropriate for public health.

OTHER REGULATORY ISSUES & CONCERNS

While any policy regulating e-cigarettes is a step in the right direction to protect the health of youth, unintended consequences can occur unless such policies are part of a comprehensive regulation of all commercial tobacco products. For instance, a policy banning flavored e-cigarettes that does not include menthol increases the risk that youth users will simply switch from banned e-cigarette flavors to menthol e-cigarettes if they are not already using a mint or menthol flavor. Even a ban on all flavored e-cigarettes including menthol could push nicotine-addicted youth to transition to menthol-flavored combustible cigarettes or flavored cigarillos or cigars, which are legally sold in most communities. Regulating e-cigarettes as part of a comprehensive commercial tobacco regulation also eases enforcement and supports the community's overall public health goal.

> *"Policymakers and regulators need to remain alert to all product, marketing, and regulatory actions, craft policies that can accommodate foreseeable changes, and update policies as necessary and appropriate for public health."*

RESOURCES & REFERENCES

ORGANIZATIONS

Organizations with additional vaping prevention and control resources

Public Health Law Center at the Mitchell Hamline School of Law

Vaping Prevention Resource

UNC Lineberger Comprehensive Cancer Center

Counter Tools

American Lung Association

American Heart Association

American Cancer Society

Center for Tobacco Products

Truth Initiative

ChangeLab Solutions

Campaign for Tobacco-Free Kids

Tobacconomics

Preventing Tobacco Addiction Foundation/Tobacco 21

Centers for Disease Control and Prevention (CDC)

American Nonsmokers' Rights Foundation

ADDITIONAL RESOURCES

E-CIGARETTES: BACKGROUND & OVERVIEW

Youth Tobacco Use: Results from the National Youth Tobacco Survey, U.S. Food & Drug Admin.
2016 U.S. Surgeon General's Report: E-Cigarette Use Among Youth and Young Adults, Centers for Disease Control and Prevention
Public Health Consequences of E-Cigarettes, National Academies of Sciences, Engineering, and Medicine
U.S. E-Cigarette Regulations-50 State Review (50-state review of state e-cigarette regulations, updated quarterly), Public Health Law Center

FEDERAL E-CIGARETTE REGULATION

Vaporizers, E-Cigarettes, and other Electronic Nicotine Delivery Systems (ENDS), U.S. Food & Drug Admin.
Extension & an E-Cigarette Epidemic: FDA's Gatekeeping Authority for E-Cigarettes, Public Health Law Center
Other Public Health Law Center resources related to e-cigarettes and federal regulation

TOBACCO RETAIL LICENSING

Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General, U.S. Dep't of Health & Human Servs.
STATE System Licensure Fact Sheet, Centers for Disease Control & Prevention
Using Licensing and Zoning to Regulate Tobacco Retailers, Tobacco Control Legal Consortium
Licensing, Zoning, and Retailer Density, Counter Tobacco
Location, Location, Location: Tobacco & E-Cig Point of Sale - Regulating Retailers for Public Health, Public Health Law Center
Comprehensive Tobacco Retailer Licensing Ordinance (sample model ordinance), Public Health Law Center
Minnesota City Retail Tobacco Licensing Ordinance (sample model ordinance), Public Health Law Center

SMOKE-FREE/VAPE-FREE/USE RESTRICTIONS

The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General, U.S. Dep't of Health and Human Servs.
CDC Vital Signs—Secondhand Smoke: An Unequal Danger, Ctrs. for Disease Control and Prevention
Overview List –Number of Smokefree and Other Tobacco-Related Laws, American Nonsmokers' Rights Foundation
States and Municipalities with Laws Regulating Use of Electronic Cigarettes, American Nonsmokers' Rights Foundation
Electronic Smoking Devices, and Secondhand Aerosol, American Nonsmokers' Rights Foundation
Electronic Smoking Devices (ESDs), and Smokefree Laws, American Nonsmokers' Rights Foundation
How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking – Attributable Disease: A Report of the Surgeon General, U.S. Dep't of Health & Human Servs.
Model Ordinance Prohibiting Smoking in All Workplaces and Public Places (100% Smokefree), Americans for Nonsmokers' Rights
Model Ordinance Prohibiting Smoking in Outdoor Places of Employment and Public Places, Americans for Nonsmokers' Rights
California Smoke-free MUH Model Ordinance 16-17 (also includes sample enforcement language), Public Health Law Center
Marijuana in Multi-Unit Residential Settings, Public Health Law Center

TAXATION AND OTHER PRICING POLICIES

Pricing Policy: A Tobacco Control Guide 2, Center for Public Health Systems Science et al.
E-Cigarette Taxation: Frequently Asked Questions, Tobacco Control Legal Consortium
State Cigarette Excise Tax Rates & Rankings, Campaign for Tobacco-Free Kids
Federal Trade Commission Cigarette Report for 2018, at 2 and tbl.2G (2018), U.S. Fed. Trade Comm'n
Taxation of Emerging Tobacco Products, Tobacconomics
Taxation of Emerging Tobacco Products - Executive Summary, Tobacconomics
Death on a Discount: Regulating Tobacco Product Pricing, Tobacco Control Legal Consortium
Regulating Tobacco Product Pricing: Guidelines for State and Local Governments, Tobacco Control Legal Consortium

FLAVORED TOBACCO PRODUCTS (INCLUDING E-CIGARETTES)

Regulating Flavored Tobacco Products, Public Health Law Center
U.S. Sales Restrictions on Flavored Tobacco Products, Public Health Law Center
Tobacco Products and Health Harms: Flavored Tobacco Products, Campaign for Tobacco-Free Kids

TOBACCO 21

Public Health Implications of Raising the Minimum Age of Legal Access to Tobacco Products, Inst. of Med.
The Health Consequences of Smoking - 50 Years of Progress: A Report of the Surgeon General, U.S. Dep't of Health & Human Servs.
Tobacco 21: Model Policy, Public Health Law Center

TOBACCO PRODUCT WASTE

Tobacco and Its Environmental Impact: An Overview, World Health Organization
Alert: Public Health Implications of Electronic Cigarette Waste, 108 Am. J. Pub. Health 1489, Yogi Hale Hendlin
Disposing of E-Cigarette Waste: FAQ for Schools and Others, Public Health Law Center
Tobacco Product Waste: Frequently Asked Questions, Public Health Law Center and American Lung Association of California
Commercial Tobacco Pollution, Public Health Law Center
Other Public Health Law Center resources related to tobacco product waste

ADVOCACY TOOLS & INTERVENTIONS

Nine Questions: A Strategy Planning Tool for Advocacy Campaigns, County Health Rankings
Public Health Media Advocacy Action Guide: Elements of a Media Advocacy Campaign, Advocacy Incubator
Advocacy Action Guide: A Toolkit for Strategic Policy Advocacy Campaigns, Advocacy Incubator
Youth Advocacy Toolkit, Tobacco Resistance Unit (TRU)
Reducing Vaping Among Youth and Young Adults, Substance Abuse and Mental Health Services Administration (SAMHSA) Guide

POSSIBLE LEGAL CHALLENGES TO COMMERCIAL TOBACCO REGULATIONS

General
Public Health Law Center resources on commercial tobacco litigation
Public Health Law Center resources on federal tobacco regulation and related legal challenges

Local Authority & Preemption
Public Health Law Center, Dillon's Rule, Home Rule, and Preemption
Public Health Law Center, Untangling the Preemption Doctrine in Tobacco Control
Tobacco Control Legal Consortium, Preemption: The Biggest Challenge to Tobacco Control

Takings
Tobacco Control Legal Consortium, Tobacco Control and the Takings Clause - Tips & Tools

First Amendment/Commercial Speech
Tobacco Control Legal Consortium, Regulating Tobacco Marketing: "Commercial Speech" Guidelines for State and Local Governments
Tobacco Control Legal Consortium, Restricting Tobacco Advertising - Tips & Tools
Public Health Law Center, Commercial Speech Flowchart for Public Health Regulation

REFERENCES

1 Annette K. Regan et al., *Electronic Nicotine Delivery Systems: Adult Use and Awareness of the "E-cigarette" in the U.S.A.,* 22 Tobacco Control 19-23 (2013).

2 Teresa W. Wang et al., *E-Cigarette Use Among Middle and High School Students — United States, 2020*, 69 Morb. & Mort. Wkly. Rep. 1310 (2020), https://www.cdc.gov/mmwr/volumes/69/wr/mm6937e1.htm?s_cid=mm6937e1_w.; Karen A. Cullen et al., *E-Cigarette Use Among Youth in the United States, 2019*, 322 J. Am. Med. Assoc. 2095 (2019); Modifications to Compliance Policy for Certain Deemed Tobacco Products; Draft Guidance for Industry; Availability, 84 Fed. Reg. 9345 (Mar. 14, 2019) [hereinafter Modifications re: Deemed Tobacco Products]; Nicolas Chadhi et al., Understanding the Implications of the "Vaping Epidemic" Among Adolescents and Young Adults: A Call for Action, J. Subst. Abuse 40(1): 7-10 (2019).

3 *Smoking & Tobacco Use: For Healthcare Providers*, Ctrs. for Dis. Control & Prev., https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease/healthcare-providers/index.html (last reviewed Mar. 17, 2020); *Quick Facts on the Risks of E-cigarettes for Kids, Teens, and Young Adults,* Ctrs. for Disease Control & Prev., https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html (last reviewed Sept. 29, 2020).

4 Wang et al., *supra* note 2; Cullen et al., *supra* note 2.

5 *See* Wang et al., *supra* note 2.

6 Nat'l Acads. Scis., Eng'g, & Med., Public Health Consequences of E-Cigarettes (Kathleen Stratton et al. eds., Nat. Acads. Press 2018)[hereinafter Public Health Consequences]; *E-cigarettes: Facts, Stats and Regulations*, Truth Initiative (Nov. 11, 2019), https://truthinitiative.org/research-resources/emerging-tobacco-products/e-cigarettes-facts-stats-and-regulations.

7 Wang et al., *supra* note 2; Cullen et al., *supra* note 2; Modifications re: Deemed Tobacco Products, *supra* note 2; Chadhi et al., *supra* note 2.

8 Chadhi et al., *supra* note 2.

9 U.S. Dep't. Health & Hum. Servs., E-Cigarette Use Among Youth and Young Adults: A Report of the Surgeon General (U.S. Dep't. Health & Hum. Servs. 2016), https://www.cdc.gov/tobacco/data_statistics/sgr/e-cigarettes/index.htm#report [hereinafter 2016 U.S. Surgeon General's Report].

10 Julia Cen Chen-Sankey et al., *E-cigarette Marketing Exposure and Subsequent Experimentation Among Youth and Young Adults*, 144 Pediatrics e20191119 (2019), https://pubmed.ncbi.nlm.nih.gov/31659003.

11 *Id.*; Lauren Collins et al., E-cigarette Marketing and Communication: How E-cigarette Companies Market E-cigarettes and the Public Engages with E-cigarette Information, 21 Nic. Tobacco Res. 14 (2019), https://pubmed.ncbi.nlm.nih.gov/29315420/; Alexandra Loukas et al., Electronic Nicotine Delivery Systems Marketing and Initiation Among Youth and Young Adults, 144 Pediatrics e20183601 (2019), https://pediatrics.aappublications.org/content/144/3/e20183601.

12 Nicole E. Nicksic et al., Recall of E-cigarette Advertisements and Adolescent E-cigarette Use, 3 Tobacco Regul. Sci. 210 (2017), https://pubmed.ncbi.nlm.nih.gov/29104901.

13 *See* 2016 U.S. Surgeon General's Report, *supra* note 9.

14 Public Health Consequences, *supra* note 6.

15 Mohammedhassan Mirbolouk et al., *Prevalence and Distribution of E-Cigarette Use Among U.S. Adults: Behavioral Risk Factor Surveillance System*, 2016, 169 Annals Intern. Med. 429 (2018), https://pubmed.ncbi.nlm.nih.gov/30167658.

16 Public Health Consequences, *supra* note 6.

17 *E-cigarettes: Facts, Stats and Regulations*, *supra* note 6.

18 Mirbolouk et al., *supra* note 15.

19 *Quick Facts*, *supra* note 3; *Electronic Cigarettes: What's the Bottom Line?*, Ctrs. for Disease Control & Prev., https://www.cdc.gov/tobacco/basic_information/e-cigarettes/pdfs/Electronic-Cigarettes-Infographic-p.pdf (last visited Sept. 30, 2020).

20 Public Health Consequences, *supra* note 6.

21 Chadhi et al., *supra* note 2.

22 Public Health Consequences, *supra* note 6.

23 *Id*.

24 *Id*.

25 *Quick Facts, supra* note 3.

26 Rachel Z. Behar et al., *Identification of Toxicants in Cinnamon-flavored Electronic Cigarette Refill Fluids,* 28 Toxicol. In Vitro 198 (2014), https://www.sciencedirect.com/science/article/abs/pii/S0887233313002610; Allison M. Glasser et al., *Overview of Electronic Nicotine Delivery Systems: A Systematic Review*, 52 Am. J. Prev. Med. e33 (2017), https://www.sciencedirect.com/science/article/abs/

pii/S0749379716305736.

27 *Quick Facts*, *supra* note 3.

28 Public Health Consequences, *supra* note 6.

29 Preethi Govindarajan et al., *E-Cigarette and Liquid Nicotine Exposures Among Young Children,* 141 Pediatrics e20173361(2018), https://pediatrics.aappublications.org/content/141/5/e20173361.

30 *E-cigarette or Vaping Use-Associated Lung Injury (EVALI),* Am. Lung Assoc., https://www.lung.org/lung-health-diseases/lung-disease-lookup/evali (last visited Sept. 30, 2020).

31 *Outbreak of Lung Injury Associated with E-cigarette Use, or Vaping,* Ctrs. for Disease Control & Prev. (2020), https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html (last updated Feb. 25, 2020).

32 *Id*.

33 Public Health Consequences, *supra* note 6.

34 Stanton A. Glantz & David W. Bareham, *E-Cigarettes: Use, Effects on Smoking, Risks, and Policy Implications*, 39 Ann. Rev. Pub. Health 215 (2018), https://pubmed.ncbi.nlm.nih.gov/29323609.

35 Public Health Consequences, *supra* note 6.

36 *Vaping Devices (Electronic Cigarettes) DrugFacts,* Nat'l Inst. on Drug Abuse, (Jan. 2020), https://www.drugabuse.gov/publications/drugfacts/vaping-devices-electronic-cigarettes#ref.

37 Michael Unger & Darian W. Unger, *E-cigarettes/Electronic Nicotine Delivery Systems: A Word of Caution on Health and New Product Development*, 10 J. Thoracic Dis. S2588 (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6178300.

38 *Id*.

39 Matthew C. Fadus et al., *The rise of E-cigarettes, Pod Mod Devices, and JUUL Among Youth: Factors Influencing Use, Health Implications, and Downstream Effects,* 201 Drug & Alcohol Depend. 85 (2019), https://pubmed.ncbi.nlm.nih.gov/31200279.

40 Minal Patel et al., *Parents' Awareness and Perceptions of JUUL and Other E-Cigarettes,* 57 Am. J. Prev. Med. 695 (2019), https://www.ajpmonline.org/article/S0749-3797(19)30281-8/pdf.

41 Greta Hsu et al., *Evolution of Electronic Cigarette Brands From 2013-2014 to 2016-2017: Analysis of Brand Websites,* 20 J. Med. Int. Res. e80 (2018), https://pubmed.ncbi.nlm.nih.gov/29530840.

42 Chadhi et al., *supra* note 2.

43 Public Health Consequences, *supra* note 6.

44 Modifications re: Deemed Tobacco Products, *supra* note 2.

45 *Id*.

46 Wang et al., *supra* note 2; Cullen et al., *supra* note 2.

47 Public Health Consequences, *supra* note 6.

48 Natalie Hemmerich et al., *A List of Permissible Electronic Nicotine Delivery Systems Ingredients Would be More Effective,* 110 Am. J. Pub. Health 774 (2020), https://ajph.aphapublications.org/doi/10.2105/AJPH.2020.305677.

49 *Id.*; Jody L. Sindelar, *Regulating Vaping - Policies, Possibilities, and Perils,* 382 New Eng. J. Med. e54 (2020), https://www.nejm.org/doi/full/10.1056/NEJMp1917065.

50 Truth Initiative, *Action Needed on E-cigarettes* (2019), https://truthinitiative.org/research-resources/emerging-tobacco-products/action-needed-e-cigarettes.

51 *E-cigarettes: Facts, Stats and Regulations, supra* note 6.

52 Charles J. Courtemanche et al., *Influence of the Flavored Cigarette Ban on Adolescent Tobacco Use*, 52 Am. J. Prev. Med. e139 (2017), https://pubmed.ncbi.nlm.nih.gov/28081999/.

53 *Id*.

54 *E-cigarettes: Facts, Stats and Regulations*, *supra* note 6.

55 Amy Ackerman et al., *Reducing the Density and Number of Tobacco Retailers: Policy Solutions and Legal Issues,* 19 Nicotine Tob. Res. 133 (2017), https://pubmed.ncbi.nlm.nih.gov/27127232.

56 Neil McKeganey et al., *Sources of Youth Access to JUUL Vaping Products in the United States*, 10 Addict. Behavs. Reps. 100232 (2019), https://pubmed.ncbi.nlm.nih.gov/31832537.

57 Family Smoking Prevention and Tobacco Control Act, Pub. L. No. 111–31, 123 Stat. 1776 (2009) (codified at 21 U.S.C. § 387).

58 The rule also applies to cigars, e-cigarettes, hookah, pipe tobacco, dissolvable tobacco products, and any other product containing tobacco, or nicotine derived from tobacco. It does exclude from regulation any "accessories" of the newly covered products, but it does

apply to components and parts. *See*, e.g., Tobacco Control Legal Consortium, *The Deeming Regulation: FDA Authority Over E-Cigarettes, Cigars, and Other Tobacco Products* (2016), https://www.publichealthlawcenter.org/sites/default/files/resources/tclc-fda-deemingreg-regulation-authority-Dec2016.pdf.

59 21 U.S.C. § 387g.

60 21 U.S.C. § 387 (d)(3). The Act restricts the authority of FDA to require the reduction of nicotine yields of a product to zero.

61 21 U.S.C. § 387 (a)(1)(A).

62 *See*, e.g., Truth Initiative, *Why Tobacco is a Racial Justice Issue* (Aug. 3, 2020), https://truthinitiative.org/research-resources/targeted-communities/why-tobacco-racial-justice-issue; Truth Initiative, *Tobacco Use in LGBT Communities* (Feb 13, 2018), https://truthinitiative.org/research-resources/targeted-communities/tobacco-use-lgbt-communities; see also Philip H. Smith, *Use of Mentholated Cigarettes and Likelihood of Smoking Cessation in the United States: A Meta-Analysis*, 22 Nicotine Tob. Res. 307-16 (Mar. 2020), .

63 The restriction on characterizing flavors did not apply to e-cigarettes, but the menthol exemption has been replicated in subsequent FDA (as well as state and local) actions. *See*, e.g., Natalie Hemmerich, *Much Ado About Nothing: FDA's Lackluster Effort to Restrict Flavors*, Public Health Law Center (Jan. 15, 2020), https://publichealthlawcenter.org/blogs/2020-01-08/much-ado-about-nothing-fda%E2%80%99s-lackluster-effort-restrict-flavors; Public Health Law Center, *U.S. Sales Restrictions on Flavored Tobacco Products (2020*), https://www.publichealthlawcenter.org/sites/default/files/resources/US-sales-restrictions-flavored-tobacco-products-2020.pdf.

64 *See* U.S. Food & Drug Admin., *Retailers: Chart of Required Warning Statements on Tobacco Product Packaging and Advertising* (last updated Aug. 13, 2018), https://www.fda.gov/tobacco-products/retail-sales-tobacco-products/retailers-chart-required-warning-statements-tobacco-product-packaging-and-advertising.

65 81 Fed. Reg. 28973, 28979 (May 10, 2016), https://www.federalregister.gov/documents/2016/05/10/2016-10685/deeming-tobacco-products-to-be-subject-to-the-federal-food-drug-and-cosmetic-act-as-amended-by-the.

66 21 U.S.C. § 387p(a)(2)(A).

67 21 U.S.C. § 387k. ("Modified risk" tobacco products are those "sold or distributed for use to reduce harm or the risk of tobacco related disease associated with commercially marketed tobacco products.").

68 21 U.S.C. §387k.

69 On September 9, 2019, FDA sent a letter to JUUL Labs, Inc., notifying it of its illegal marketing of products as modified risk products. *See* Warning Letter from Center for Tobacco Products to Mr. Kevin Burns, CEO, JUUL Labs, Inc. (Sept. 9. 2019), https://www.fda.gov/inspections-compliance-enforcement-and-criminal-investigations/warning-letters/juul-labs-inc-590950-09092019.

70 21 U.S.C. § 387j(a)(1)l 919.

71 *See* Public Health Law Center, *Extension & An E-Cigarette Epidemic: The FDA's Gatekeeping Authority for E-Cigarettes* (2020), https://www.publichealthlawcenter.org/sites/default/files/resources/FDA-Gatekeeping-Authority-for-E-Cigarettes.pdf (describing the three pathways).

72 21 U.S.C. §387j. The "public health standard" is also the standard by which the FDA is authorized to set tobacco product standards (Sec. 907).

73 21 U.S.C. § 387(a)(f).

74 *Id*.

75 The original date by which manufacturers were supposed to submit applications was May 12th, 2020. Due to the COVID-19 pandemic, the deadline was pushed back to September 9, 2020. Products with applications on file by that date will be allowed to continue marketing products until September 9, 2021, after which points products will require an affirmative marketing order to stay on the market. *See* Public Health Law Center, *Extension & An E-Cigarette Epidemic: The FDA's Gatekeeping Authority for E-Cigarettes (2020)*, https://www.publichealthlawcenter.org/sites/default/files/resources/FDA-Gatekeeping-Authority-for-E-Cigarettes.pdf.

76 *See* also Natalie Hemmerich, *supra* note 63.

77 The FDA warning letters went to three firms for illegally marketing disposable products and seven firms for illegally marketing e-cigarettes in packaging that imitates food products, such as cereal and popcorn. *See* U.S. Food & Drug Admin, Press Release, *FDA Notifies Companies, Including Puff Bar, to Remove Flavored Disposable E-Cigarettes and Youth-Appealing E-Liquids from Market for Not Having Required Authorization,* (July 20, 2020), https://www.fda.gov/news-events/press-announcements/fda-notifies-companies-including-puff-bar-remove-flavored-disposable-e-cigarettes-and-youth.

78 *See* U.S. Food & Drug Admin, *CTP Letters to Industry* (last updated June 16, 2020), https://www.fda.gov/tobacco-products/rules-regulations-and-guidance/ctp-letters-industry.

79 *See*, e.g., U.S. Food & Drug Admin., *Compliance, Enforcement, & Training* (last updated June 3, 2020), https://www.fda.gov/tobacco-

products/compliance-enforcement-training.

80 Public Health Law Center, *U.S. E-Cigarette Regulations: 50-State Review* (2020) (updated quarterly), https://www.publichealthlawcenter.org/resources/us-e-cigarette-regulations-50-state-review.

81 *See*, e.g., *Lexington-Fayette Food & Bev. Assoc. v. Lexington-Fayette Urban Cty. Gov*. 131 S.W.3d 745, 752 (Ky. 2004), quoting *Adams, Inc. v. Louisville and Jefferson County Bd. of Health*, 4399 S.W.2d 586, 590 (Ky. 1969).

82 *See* Public Health Law Center, *U.S. E-Cigarette Regulations, supra* note 80.

83 Ctrs. of Disease Control & Prevention, *Outbreak of Lung Injury Associated with the Use of E-Cigarette, or Vaping, Products*, https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html (last accessed Sept. 10, 2020)

84 *See* Public Health Law Center, *States and Tribes Stepping in to Protect Communities from the Dangers of E-cigarettes: Actions and Options* (2020), https://www.publichealthlawcenter.org/resources/states-and-tribes-stepping-protect-communities-dangers-e-cigarettes-actions-and-options.

85 Public Health Law Center, *Regulating Tobacco in a Post-Deeming World: State and Local Options* (2016), https://www.publichealthlawcenter.org/sites/default/files/resources/phlc-tobacco-post-deemingreg-2016.pdf.

86 U.S. Dep't of Health & Human Servs, Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General 545 (2012) [hereinafter 2012 U.S. Surgeon General's Report].

87 Public Health Law Center, *The Master Settlement Agreement: An Overview* (2019), https://publichealthlawcenter.org/sites/default/files/resources/MSA-Overview-2019.pdf.

88 U.S. Fed. Trade Comm'n, Federal Trade Commission Cigarette Report for 2016 (2018), https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-cigarette-report-2016-federal-trade-commission-smokeless-tobacco-report/ftc_cigarette_report_for_2016_0.pdf; see also Kurt Ribisl et al., D*isparities in Tobacco Marketing and Product Availability at the Point of Sale: Results of a National Study*, 105 Preventive Med. 381–88 (2017), https://www.ncbi.nlm.nih.gov/pubmed/28392252.

89 Lindsay Robertson et al., *A Systematic Review of the Impact of Point-of-Sale Tobacco Promotion on Smoking,* 17 Nicotine & Tobacco Res. 2–17 (2015), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4832971.

90 *See* 2012 U.S. Surgeon General's Report, *supra* note 86, at 543; see also Lisa Henriksen et al., *Is Adolescent Smoking Related to the Density and Proximity of Tobacco Outlets and Retail Cigarette Advertising Near Schools?*, 47 Preventative Med. 210–12 (2008); William J. McCarthy et al., *Density of Tobacco Retailers Near Schools: Effects on Tobacco Use Among Students*, 99 Am. J. of Pub. Health 2006, 2011–2012 (2009); Sandy J. Slater et al., *The Impact of Retail Cigarette Marketing Practices on Youth Smoking Uptake*, 161 Arch. Pediatr. Adolesc. Med. 440 (2007); Nina Schleicher et al., *Tobacco Outlet Density Near Home and School: Associations with Smoking and Norms Among Teens*, 91 Preventive Med. 287–93 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5065244.

91 *See*, e.g., Lorraine R. Reitzel et al., *The Effect of Tobacco Outlet Density and Proximity on Smoking Cessation*, 101 Am. J Public Health 315-20 (2011), https://pubmed.ncbi.nlm.nih.gov/21164089; Michael O. Chalton et al., *Tobacco Retail Availability and Risk of Relapse Among Smokers Who Make a Quit Attempt: A Population-Based Cohort Study,* 27 Tobacco Control 163-69 (2018), ttps://tobaccocontrol.bmj.com/content/27/2/163.

92 Joseph J. Lee et al., *A Systematic Review of Neighborhood Disparities in Point-of-Sale Tobacco Marketing,* 105 Am. J. Pub. Health e8-e18 (2015), https://www.ncbi.nlm.nih.gov/pubmed/26180986.

93 A 2016 study of a nationally representative sample of US households found that 41 percent of 13 to16 year-olds lived within a half mile of a tobacco retailer, and 44 percent attended a school within 1000 feet of a tobacco retailer. *See* Nina Schleicher et al., *Tobacco Outlet Density Near Home and School: Associations with Smoking and Norms Among Teens*, 91 Preventive Med. 287–93, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5065244.

94 Lacy Brame et al., *Electronic Nicotine Delivery System Landscape in Licensed Tobacco Retailers: Results of a County-level Survey in Oklahoma*, 6 BMJ Open e011053 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4908906; Kimberly G. Wagoner et al., *Availability and Placement of Electronic Nicotine Delivery Systems at the Point-of-Sale,* 20 Nicotine & Tobacco Res. 1020–24, https://www.ncbi.nlm.nih.gov/pubmed/29059443; Hannah R. Day et al., *Point of Sale Scanner Data for Rapid Surveillance of the E-Cigarette Market,* 3 Tobacco Reg. Sci. 325–32 (2017), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5613983.

95 *See*, e.g., P. Dilip Venugopal et al., *Socioeconomic Disparities in Vape Shop Density and Proximity to Public Schools in the Conterminous United States, 2018*, 21 Health Promotion Prac. 92 (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6988846; Honqying Dai & Jianqiang Hao, *Geographic Density and Proximity of Vape Shops to Colleges in the U.S.A.,* 26 Tobacco Control 379 (2017), https://pubmed.ncbi.nlm.nih.gov/27302700.

96 *See* Youn Ok Lee & Annice E. Kim, '*Vape Shops' and 'E-Cigarette Lounges' Open Across the USA to Promote ENDS*, 24 Tobacco Control

410–12 (2015); Joseph G. L. Lee et al., *A New Form of Nicotine Retailers: A Systematic Review of the Sales and Marketing Practices of Vape Shops,* 27 Tobacco Control e70, e70–e75 (2018); Jennifer Y. Tsai et al., *Vape Shop Retailers' Perceptions of Their Customers, Products and Services: A Content Analysis*, 2 Tobacco Prevention & Cessation (Suppl.) 3, 3 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC5517047.

97 Ellen J. Hahn et al., *Electronic Cigarette Retail Outlets and Proximity to Schools,* 29 Am. J. Health 380–83 (2015), https://www.ncbi.nlm.nih.gov/pubmed/24968182; Andrea D. Burbank et al., *A Pilot Study of Retail 'Vape Shops' in the San Francisco Bay Area,* 2 Tobacco Prevention & Cessation (Suppl.) 6 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC5382868; Hongying Dai & Jianqiang Hao, *Geographic Density and Proximity of Vape Shops to Colleges in the USA,* 26 Tobacco Control 379–85 (2017), https://www.ncbi.nlm.nih.gov/pubmed/27302700; Daniel P. Giovenco et al., *Census Tract Correlates of Vape Shop Locations in New Jersey,* 40 Health & Place 123–28 (2016); Georgiana Bostean et al., *Sociodemographic Disparities in E-Cigarette Retail Environment: Vape Stores and Census Tract Characteristics in Orange County, CA*, 50 Health & Place 65–72 (2018); Daniel P. Giovenco, *Smoke Shop Misclassification May Cloud Studies on Vape Shop Density,* 20 Nicotine & Tobacco Res. 1025–26 (2018).

98 Marshall Cheney et al., *Marketing Practices of Vapor Store Owners,* 105 Am. J. Public Health e16–e21 (2015), https://www.ncbi.nlm.nih.gov/pubmed/25880960; Amanda Y. Kong et al., *Using the Vape Shop Standardized Assessment for Retail Settings (V-STARS) to Assess Product Availability, Price Promotions, and Messaging in New Hampshire Vape Shop Retailers*, 3 Tobacco Reg. Sci. 174–82 (2017), https://www.ncbi.nlm.nih.gov/pubmed/29201950.

99 In 2014, 73 percent of youth in grades six through 12 believed electronic cigarettes were less harmful than combustible cigarettes, and nearly half believed they were less addictive. *See* Stephen M. Amrock et al., *Perceptions of E-Cigarette and Noncigarette Tobacco Products Among US Youth,* 138 Pediatrics e20154306 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5079074.

100 Daniel Rodriguez et al., *Predictors of Tobacco Outlet Density Nationwide: A Geographic Analysis,* 22 Tobacco Control 349–55 (2013), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3431432.

101 Andrea C. Villanti et al., *Changes in the Prevalence and Correlates of Menthol Cigarette Use in the USA,* 2004–2014, 25 Tobacco Control ii14-ii20 (2016), http://tobaccocontrol.bmj.com/content/tobaccocontrol/early/2016/10/11/tobaccocontrol-2016-053329.full.pdf; Amanda Richardson et al., *How the Industry is Marketing Menthol Cigarettes: the Audience, the Message, and the Medium*, 24 Tobacco Control 594-600 (2015), https://tobaccocontrol.bmj.com/content/24/6/594; National Youth Advocacy Coalition, *Coming Out about Smoking: A Report from the National LGBTQ Young Adult Tobacco Project* (2010), http://lgbttobacco.org/files/Coming_Out_About_Smoking_NYAC.pdf; Public Health Law Center, *Underserved & Overlooked: Tobacco Addiction Among the Homeless Population* (2017), https://publichealthlawcenter.org/sites/default/files/resources/Underserved-Overlooked-Tobacco-Addiction-Homeless-2017.pdf.

102 Jamie Ducharme, *'It's Insidious': How JUUL Pitched E-Cigs to Native American Tribes,* Time (2020), https://time.com/5778534/juul-native-american-tribes.

103 *See*, e.g., Risa Lavizzo-Mourey and David Williams, *Being Black is Bad for Your Health,* U.S. News & World Report (2016), https://www.usnews.com/opinion/blogs/policy-dose/articles/2016-04-14/theres-a-huge-health-equity-gap-between-whites-and-minorities.

104 For more information about the difference between the two regulatory approaches of licensing an zoning, see Tobacco Control Legal Consortium, *Using Licensing and Zoning to Regulate Tobacco Retailers* (2016), https://www.publichealthlawcenter.org/sites/default/files/resources/tclc-guide-licensing-and-zoning-2016.pdf.

105 Ctrs. for Disease Control & Prevention, *STATE System Licensure Fact Sheet*, https://www.cdc.gov/statesystem/factsheets/licensure/Licensure.html (last visited Aug. 6, 2020).

106 *See*, e.g., Minn. Stat. § 340A.503, subd. 4 (prohibiting adults under 21 from entering premises of licensed alcohol retailers with limited exceptions).

107 Tobacco Control Legal Consortium, *Prohibiting the Sale of Tobacco Products in Pharmacies — Tips & Tools* (2018), http://publichealthlawcenter.org/sites/default/files/resources/Prohibiting-Pharmacy-Sales-of-Tobacco-Products-2018.pdf; Boston Public Health Commission, *Regulation Restricting the Sale of Tobacco Products in the City of Boston* (2009), http://www.bphc.org/whatwedo/tobacco-freeliving/Documents/TobaccoRestrictionRegulation_12_08.pdf.

108 Yue Jin et al., *Tobacco-Free Pharmacy Laws and Trends in Tobacco Retailer Density in California and Massachusetts,* 106 Am. J. Public Health 679–85 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4986051.

109 For more on the internal sale of tobacco products, see Public Health Law Center, *Online Sales of E-Cigarettes & Other Tobacco Products* (2019), https://www.publichealthlawcenter.org/sites/default/files/resources/Online-Sales-E-Cigarettes-Other-Tobacco-Products.pdf.

110 *Id*.

111 Marice Ashe et al., *Land Use Planning and the Control of Alcohol, Tobacco, Firearms, and Fast Food Restaurants,* 93 Am. J. of Public

Health 1404–08 (2003), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1447982.
112 Allison E. Myers et al., *A Comparison of Three Policy Approaches for Tobacco Retailer Reduction*, 74 Preventive Med. 67–73 (2015), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4563823.
113 *Id*.
114 Douglas A. Luke et al., *Tobacco Town: Computational Modeling of Policy Options to Reduce Tobacco Retailer Density*, 107 Am. J. of Public Health 740–46 (2017), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5388950; see also Marice Ashe et al., *supra* note 111.
115 Kurt M. Ribisl et al., *supra* note 88.
116 S.F. Tobacco-Free Project, *Reducing Tobacco Retail Density in San Francisco: A Case Study* (2016), http://2gahjr48mok145j3z438sknv.wpengine.netdna-cdn.com/wp-content/uploads/Retail-Density-Case-Study-1.27.16-FINAL-to-TFP.pdf.
117 S. F., Cal., Ordinance 259–14 (Dec. 9, 2014), https://www.sfbos.org/ftp/uploadedfiles/bdsupvrs/ordinances14/o0259- 14.pdf.
118 City of Phila., *Tobacco Retailer Permit Frequently Asked Questions* (2017), http://www.phila.gov/health/pdfs/environment/Tobacco%20Retailer%20Permit%20FAQ%202_5_2018.pdf.
119 *See* Public Health Law Center, *Coupons and Other Price Discounting Policy Options* (2017), https://publichealthlawcenter.org/sites/default/files/resources/Coupons-Other-Price-Discounting-Policy-Options-2017.pdf; Tobacco Control Legal Consortium, *Death on a Discount: Regulating Tobacco Product Pricing* (2015), https://www.publichealthlawcenter.org/sites/default/files/resources/tclc-fs-death-on-discount-2015.pdf.
120 Tobacco Control Legal Consortium, *Point of Sale Strategies: A Tobacco Control Guide (2014),* https://publichealthlawcenter.org/sites/default/files/resources/tclc-guide-pos-policy-WashU-2014.pdf.
121 CounterTobacco.org et al., *Deadly Alliance: How Big Tobacco and Convenience Stores Partner to Market Tobacco Products and Fight Life-saving Policies* (2016), http://countertobacco.org/wp-content/uploads/2016/06/Deadly_Alliance_2016.pdf.
122 OBJ Carter et al., *The Effect of Retail Cigarette Pack Displays on Unplanned Purchases: Results from Immediate Postpurchase Interviews,* 18 Tobacco Control 218-221 (2009), https://pubmed.ncbi.nlm.nih.gov/19264731/; Annice E. Kim, *Influence of Tobacco Displays and Ads on Youth: A Virtual Store Experiment,* 131 Pediatrics e88-e95 (2013), https://pediatrics.aappublications.org/content/131/1/e88.
123 Tobacco Control Legal Consortium, *supra* note 34.
124 *Id*.
125 U.S. Dep't of Health and Human Servs., The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General (2006) [hereinafter 2006 U.S. Surgeon General's Report], www.cdc.gov/tobacco/data_statistics/sgr/2006/index.htm.
126 *Id*.; Ctrs. for Disease Control and Prevention, *CDC Vital Signs—Secondhand Smoke: An Unequal Danger* (2015), www.cdc.gov/vitalsigns/pdf/2015-02-vitalsigns.pdf.
127 U.S. Dep't of Health and Human Servs., The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General (2014).
128 Americans for Nonsmokers' Rights Foundation, *Overview List –Number of Smokefree and Other Tobacco-Related Laws* (2020), http://no-smoke.org/wp-content/uploads/pdf/mediaordlist.pdf.
129 *See* 2016 U.S. Surgeon General's Report, *supra* note 9.
130 National Academies of Sciences, Engineering, and Medicine, Public Health Consequences of E-Cigarettes (2018), https://www.nap.edu/catalog/24952/public-health-consequences-of-e-cigarettes; see also Jefferson Fowles et al., *Cancer and Non-Cancer Risk Concerns from Metals in Electronic Cigarette Liquids and Aerosols,* 17 Int J. .Environ Res Public Health 2146 (2020), https://www.mdpi.com/1660-4601/17/6/2146/htm.
131 *See* 2016 U.S. Surgeon General's Report, *supra* note 9; see also Alexa Romberg et al., *Patterns of Nicotine Concentrations in Electronic Cigarettes Sold in the United States, 2013-2018*, 201 Drug Alcohol Depend. 1-7 (2019), https://pubmed.ncbi.nlm.nih.gov/31386973.
132 Americans for Nonsmokers' Rights Foundation, *States and Municipalities with Laws Regulating Use of Electronic Cigarettes,* https://no-smoke.org/wp-content/uploads/pdf/ecigslaws.pdf (last accessed Aug. 15, 2020).
133 U.S. Food & Drug Admin., *NYTS Data: A Startling Rise in Youth E-Cigarette Use* (2020), https://www.fda.gov/tobacco-products/youth-and-tobacco/2018-nyts-data-startling-rise-youth-e-cigarette-use.
134 U.S. Food & Drug Admin., *Youth and Tobacco* (2020), https://www.fda.gov/tobacco-products/public-health-education/youth-and-tobacco.
135 *See* American Civil Liberties Union, *Race, Discipline, and Safety at U.S. Public Schools*, https://www.aclu.org/issues/juvenile-justice/school-prison-pipeline/race-discipline-and-safety-us-public-schools (last accessed Oct. 2, 2020).
136 Truth Initiative, *4 Marketing Tactics E-Cigarette Companies Use to Target Youth* (2019), https://truthinitiative.org/research-resources/

tobacco-industry-marketing/4-marketing-tactics-e-cigarette-companies-use-target.

137 Dong-Chul Seo et al. *The Effect of a Smoke-free Campus Policy on College Students' Smoking Behaviors and Attitudes*, 53 Preventive Med. cine 347-52 (2011), http://sites.psu.edu/christyju/wp-content/uploads/sites/23136/2015/02/Christy.pdf.

138 Indiana University Media Relations News Release, *Study: Campus Smoking Ban Reduced Students' Smoking, Changed Attitudes*, IU News Room (Sept. 14, 2011), https://newsinfo.iu.edu/news/page/normal/19589.html.

139 *See*, e.g., Gallagher v. Clayton, 699 F. 3d 1013 (8th Cir. 2012) (upholding the City of Clayton's ordinance prohibiting smoking on any city-owned or -leased property, including buildings, grounds, parks and playgrounds, which a city resident had challenged on constitutional grounds, asserting that "the health threat of secondhand smoke from outdoor tobacco use is de minimus," and that the city lacked a sufficient rationale for prohibiting it), https://ecf.ca8.uscourts.gov/opndir/12/11/113880P.pdf.

140 American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE), *2015 Addenda Supplement to ANSI/ASHRAE Standard 62.1-2013, Ventilation for Acceptable Indoor Air Quality* (2015).

141 U. S. Dep't of Health & Human Servs., How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking – Attributable Disease: A Report of the Surgeon General (2010), http://www.surgeongeneral.gov/library/tobaccosmoke/report/full-report.pdf.

142 National Academies of Sciences, Engineering, and Medicine, *Public Health Consequences of E-Cigarettes* (2018), https://www.nap.edu/catalog/24952/public-health-consequences-of-e-cigarettes; Anna Tzortzi et al., *Passive Exposure to E-cigarette Emissions: Immediate Respiratory Effects,* 4 Tob. Prev. Cessation 18 (2018), doi.org/10.18332/tpc/89977.

143 Andrea Licht et al, *Attitudes, Experiences, and Acceptance of Smoke-free Policies Among US Multiunit Housing Residents,* 102 Am. J. Public Health 1868-71 (2012), https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2012.300717?searchHistoryKey=&prevSearch=%5BTitle%3A+attitudes%5D+and+%5BContrib%3A+hyland%5D.

144 Michael Ong et al, *Estimates of Smoking-related Property Costs in California Multiunit Housing,* 102 Am. J. Public Health 490-93 (2012), https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2011.300170; see also National Center for Health Housing, *Fact Sheet: Green & Healthy Housing: Reasons to Explore Smoke-Free Housing* (2009), https://nchh.org/resource/fact-sheet_green-and-hh_reasons-to-explore-smoke-free-housing.

145 U.S. Dep't of Homeland Security, U.S. Fire Admin., *Smoking-Related Fires in Residential Buildings (2008-2010), 13 Topical Fire Report Series 6* (2012), https://www.usfa.fema.gov/downloads/pdf/statistics/v13i6.pdf.

146 U.S. Dep't of Homeland Security, U.S. Fire Admin., Electronic Cigarette Fires and Explosions in the U.S. 2009-2016 (2017), https://www.usfa.fema.gov/downloads/pdf/publications/electronic_cigarettes.pdf; see also American Nonsmokers' Rights Foundation, *E-Cigarette Explosions and Fires* (2019), https://no-smoke.org/wp-content/uploads/pdf/E-Cigarette-Explosions-and-Fires.pdf.

147 Tobacco Control Legal Consortium, *Regulating Smoking in Multi-Unit Housing* (2011), https://publichealthlawcenter.org/sites/default/files/resources/tclc-guide-regulatingsmoking-multiunits-2011_0.pdf.

148 *See*, e.g., Public Health Law Center, *California Smoke-free MUH Model Ordinance 16-17* (2020), https://www.publichealthlawcenter.org/sites/default/files/resources/CA-Smoke-free-MUH-Model-Ordinance.pdf (providing sample enforcement language).

149 *See*, e.g., Public Health Law Center, *Smoke-Free Housing and Rent Abatement* (2019), https://publichealthlawcenter.org/sites/default/files/resources/Smoke-Free-Housing-Rent-Abatement-MN-2019.pdf (describing legal remedies available in Minnesota).

150 *See*, e.g., National Law Center of Homelessness and Poverty, *Housing Not Handcuffs 2019: Ending the Criminalization of Homelessness in U.S. Cities* (2019), https://nlchp.org/wp-content/uploads/2019/12/HOUSING-NOT-HANDCUFFS-2019-FINAL.pdf.

151 *See*, e.g., Dept. of Housing and Urban Development, *Implementing HUD's Smoke-free Policy in Public Housing,* https://www.hud.gov/sites/documents/SMOKEFREE_GUIDEBK.PDF (describing importance of education and cessation support in implementing HUD policy, as well as pre-eviction procedures).

152 *See*, e.g., National Housing Law Project, *A Guide to Equitable Smoke-free Public Housing* (2019), https://www.nhlp.org/wp-content/uploads/FINAL_-A-Guide-to-Equitable-Smoke-Free-Public-Housing-2020.01.14.pdf.

153 *See* 2012 U.S. Surgeon General's Report, *supra* note 86.

154 U.S. Fed. Trade Comm'n, Federal Trade Commission Cigarette Report for 2018 (2018), at 2 and tbl.2G (2018), https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-cigarette-report-2018-smokeless-tobacco-report-2018/p114508cigarettereport2018.pdf.

155 See Center for Public Health Systems Science et al., *Pricing Policy: A Tobacco Control Guide* 2 (2014), http://www.publichealthlawcenter.org/sites/default/files/resources/tclc-guide-pricing-policy-WashU2014.pdf.

156 *See* Frank Chaloupka, *Macro-Social Influences: The Effects of Prices and Tobacco Control Policies on the Demand for Tobacco Products*, 1 Nicotine & Tobacco Res. S105 (Supp. 1 1999); see also John A. Taurus, *Public Policy and Smoking Cessation Among Young Adults in the United States*, 68 Health Policy 321 (2004).

157 Campaign for Tobacco-Free Kids, *State Cigarette Excise Tax Rates & Rankings* (last updated July 1, 2020), https://www.tobaccofreekids.org/assets/factsheets/0097.pdf.
158 There is a federal cigarette tax, as well as minimal tax on pipe tobacco, cigars, smokeless tobacco, and snuff. The lack of parity across product classes itself can influence demand and marketing strategies. *See*, *e.g.* Campaign for Tobacco-Free Kids, *Creating Federal Tax Equity Among All Tobacco Products Would Increase Federal Revenues & Promote Public Health* (2017), https://www.tobaccofreekids.org/assets/factsheets/0354.pdf.
159 Minn. Stat. §§ 297f.01-297f.05 (2020).
160 N.C. Gen. Stat. §§ 105-113.35(a1) (2020).
161 *See also* Tobacco Control Legal Consortium, *E-Cigarette Taxation: Frequently Asked Questions* (2015), https://publichealthlawcenter.org/sites/default/files/resources/tclc-fs-ecig-taxation-2015.pdf.
162 *See* Public Health Law Center, *U.S. E-Cigarette Regulations- 50 State Review*, *supra* note 80 (50-state review of existing e-cigarette regulations, including taxation).
163 *See*, *e.g.,* World Health Organization, *Tobacco-Free Initiative: Taxation* (last visited Sept. 8, 2020), https://www.who.int/tobacco/economics/taxation/en/.
164 *See* Tobacco Control Legal Consortium, *E-Cigarette Taxation*, *supra* note 162.
165 *Id*.
166 Minn. Stat. Ann. § 297F.05(3) (2020); Minn. Dep't of Revenue Notice #12-10 (2012); *see* also Public Health Law Center, *E-Cigarette Regulations- Minnesot*a (2020), https://publichealthlawcenter.org/resources/us-e-cigarette-regulations-50-state-review/mn.
167 *Id.*
168 MASS. GEN. LAW CH. 64C § 7E(b) (2020); see also Public Health Law Center, *E-Cigarette Regulations—Massachusetts* (2020), https://publichealthlawcenter.org/resources/us-e-cigarette-regulations-50-state-review/ma; *and* Campaign for Tobacco-Free Kids, *State Excise Tax Rates for Non-Cigarette Tobacco Products* (last updated August 5, 2020), https://www.tobaccofreekids.org/assets/factsheets/0169.pdf.
169 See California Legislative Analyst's Office, *The 2020-21 Budget: Taxation of E-Cigarettes* (Feb. 4, 2020), https://lao.ca.gov/Publications/Report/4171.
170 Center for Public Health Systems Science, *Policy Strategies: A Tobacco Control Guide* (2014), https://publichealthlawcenter.org/sites/default/files/resources/tclc-guide-tobacco-policy-strategies-WashU-20 14.pdf.
171 *See, e.g.,* Campaign for Tobacco-Free Kids, Flavored Tobacco Products *Attract Kids: Brief Overview of Key Issues* (2019), https://www.tobaccofreekids.org/assets/factsheets/0399.pdf.
172 Bridget Ambrose et al., *Flavored Tobacco Product Use Among U.S. Youth Aged 12–17 Years 2013–2014,* 314 JAMA 1871–3 (2015).
173 Calculated by the Campaign for Tobacco-Free Kids based on data in the National Survey on Drug Use and Health (2014), U.S. Dep't of Health and Human Services. Substance Abuse and Mental Health Services Administration. Ctr. for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (2014); David Hammond, *Smoking Behaviour Among Young Adults: Beyond Youth Prevention,* 14 Tobacco Control 181 - 5 (2005); Paula M. Lantz, *Smoking on the Rise Among Young Adults: Implications for Research and Policy,* 12 Tobacco Control (Suppl I) i60 – i70 (2003).
174 *Id.*
175 INST. OF MED., *Public Health Implications of Raising the Minimum Age of Legal Access to Tobacco Products* (2015), https://www.nap.edu/catalog/18997/public-health-implications-of-raising-the-minimum-age-of-legal-access-to-tobacco-products.
176 *CA Smoke and Vape Association, Inc. et al v. County of Los Angeles,* et al., No. 2:20-cv-04065 (C.D. Cal. May 04, 2020) and *R.J. Reynolds Tobacco Company et al v. County of Los Angeles et al*. No. 2:20-cv-04880 (C.D. Cal. Jun 01, 2020).
177 *See* Public Health Law Center, *R.J. Reynolds Tobacco Company et al v. County of Los Angeles et al.* (2020), https://www.publichealthlawcenter.org/content/rj-reynolds-tobacco-company-et-al-v-county-los-angeles-et-al-2020 and Public Health Law Center, *CA Smoke and Vape Association, Inc. et al v. County of Los Angeles,* et al. (2020), https://www.publichealthlawcenter.org/content/ca-smoke-and-vape-association-inc-et-al-v-county-los-angeles-et-al-2020 (summarizing the two cases).
178 *R.J. Reynolds Tobacco Company, et al. v. County of Los Angeles,* et al., 2020 WL 5405668, at *2 (C.D. Cal. Aug. 7, 2020).
179 The Tobacco Control Act contains both a "preservation clause" and a "savings clause," both of which expressly state that the preemption clause does not apply to and does not limit restrictions relating to the sale of tobacco products. *See* 21 U.S.C. § 387p(a)(1) *and* 21 U.S.C. § 387p(a)(2)(B).
180 *R.J. Reynolds Tobacco Company, et al v. County of Los Angeles, et al, Docket No. 20-55930 (9th Cir. Sep 08, 2020).*

181 U.S. CONST. amend. V. This restriction applies to the states under the Due Process Clause of the Fourteenth Amendment. See *Chicago, B. & Q.R. Co. v. City of Chicago*, 166 U.S. 226, 234–35 (1897).
182 *See* Yee v. City of Escondido, 503 U.S. 519, 522–23 (1992).
183 *See* e.g. *Penn Cent. Transp. Co. v. City of New York,* 438 U.S. 104, 127 (1978) (citing Pennsylvania Coal Co. v. Mahon, 260 U.S. 393 (1922)) [hereinafter Penn Central].
184 In *Penn Central*, the Court identified three factors to be considered in analyzing such a taking: "[t]he economic impact of the regulation on the claimant;" "the extent to which the regulation has interfered with distinct investment-backed expectations;" and "the character of the governmental action." *Id*. at 124.
185 For an economic regulatory taking to be found, the economic impact must be substantial. In CCA Associates v. U.S., the court noted that "[L]ike the government, we are 'aware of no cases in which a court has found a taking where diminution in value was less than 50 percent." *CCA Associates v. U.S.,* 667 F.3d 1239, 1246 (Fed. Cir. 2011). For example, In *Gen. Food Vending Inc. v. Westfield*, for example, the Superior Court of New Jersey upheld an ordinance banning the use of all cigarette vending machines because the owners could simply put the machines to the next best alternative use. *Gen. Food Vending Inc. v. Westfield*, 672 A.2d 760, 765 (N.J. Super. Law Div. 1995).
186 *See* Tobacco Control Legal Consortium, *Regulating Tobacco Marketing: "Commercial Speech" Guidelines for State and Local Governments* (2010), https://www.publichealthlawcenter.org/sites/default/files/resources/tclc-guidelines-speech-2010.pdf.
187 *See* Texas v. Johnson, 491 U.S. 397, 414–16 (1989) (noting that First Amendment protection extends to conduct intended to express an idea).
188 Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n of New York, 447 U.S. 557, 561 (1980) ("(defining commercial speech as "expression related solely to the economic interests of the speaker and its audience").
189 *Lorillard Tobacco Co. v. Reilly,* 533 U.S. 525, 569 (2001) (The Court assumed, but did not rule, that there was "a cognizable speech interest in a particular means of displaying their products").
190 *See* Tobacco Control Legal Consortium, *Regulating Tobacco Marketing*, *supra* note 187.
191 For example, the Tobacco Control Act mandates that FDA issue graphic warning label requirements for cigarette packages and advertisements. For a deeper analysis of the legal analysis applied depending on the actor, the type of speech involved, and the nature of the government restriction, see id.
192 *Disc. Tobacco City & Lottery, Inc. v. United States,* 674 F.3d 509 (6th Cir. 2012). The 6th Circuit Court of Appeals upheld the graphic warning label requirement because the warnings would provide "undisputed factual information about the health risks of using tobacco products" and they were "reasonably related" to the government's interest in providing accurate information about health risks. *Id*. at 560.
193 *R.J. Reynolds Tobacco Co. v. FDA*, 696 F.3d 1205 (2012), *overruled on other grounds by Am. Meat Inst. v. Dept. of Agric.*, 760 F. 3d 18, 26 (D.C. Cir. 2014) (en banc.).
194 *Id*. For an analysis of the two cases, *see* Tobacco Control Legal Consortium, *Cigarette Graphic Warnings and the Divided Federal Courts* (2013), http://publichealthlawcenter.org/sites/default/files/resources/Tobacco-Control-Legal-Consortium-Cigarette-Graphic-Warnings-and-the-Divided-Federal-Courts.pdf.
195 *American Academy of Pediatrics, et al. v. U.S. Food & Drug Admin.*, No. 1:16-cv-11985-IT (D. Mass. 2019).
196 85 Fed. Reg. 15638 (March 18, 2020), https://www.govinfo.gov/content/pkg/FR-2020-03-18/pdf/2020-05223.pdf.

IMAGE SOURCES & CREDITS

COVER PAGE
Photo by CDC on Unsplash
PAGE ii
Top to Bottom
Shutterstock. Photo ID: 1028640082. Photo by Eldar Nurkovic.
Shutterstock. Photo ID: 1668441142. Photo by Sushitsky Sergey.
Shutterstock. Photo ID: 783709756. Photo by Nijat Nasibli.
Shutterstock. Photo ID: 1120175180. Photo by Aliaksandr Barouski.
PAGE iii
Banner icon by TS Graphics from the Noun Project.
PAGE 1
Photo by Morning Brew on Unsplash.
PAGE 2
Photo credit Hawaii Public Health Institute, Kick Butts Day. Hawaii Public Radio.
Shutterstock. Photo ID: 1252774594. Photo by Andrey_Popov
PAGE 3
Graphic by the Centers for Disease Control and Prevention.
PAGE 4
Graphic by the Food and Drug Administration.
PAGE 5
Shutterstock. Photo ID: 1373776301. Photo by Aleksandr Yu.
PAGE 6
Piper Johnson, youth activist, October 2019. Photo Credit: Catie Dull. NPR.
PAGE 7
Photo by Morning Brew on Unsplash.
PAGE 8
Shutterstock. Photo ID: 727821652. Photo by vladee.
iStock by Getty Images. Photo Credit: Reptile 8488. Photo ID: 1042038112.
Banner icon by TS Graphics from the Noun Project.
PAGE 9
Governor Andrew Cuomo (left) and counsel Beth Harvey (right), September 2019. Photo Credit: New York Governor's Office. The Journal News.
PAGE 10
Shutterstock. Photo ID: 1127843951. Photo by Vershinin89.
Shutterstock. Photo ID: 1536544526. Photo by Gary_Ellis_Photography.
PAGE 11
iStockPhoto. Stock Photo ID: 1203020454. Photo Credit: Kirkikis.
PAGE 12
Restrict content icon by Guilherme Lima from the Noun Project.
Map icon by Adrien Coquet from the Noun Project.
PAGE 13
No Vaping by Stephen Plaster from the Noun Project.
Shelf by Becris from the Noun Project.
Cashier by Ladalle CS from the Noun Project.
Reminder icon by HeadsOfBirds from the Noun Project.
PAGE 14
Shutterstock. Photo ID: 571366798. Photo by Mike Orlov.
iStock by Getty Images. Photo ID: 1198375405. Photo Credit: David Tran
Banner icon by TS Graphics from the Noun Project.
PAGE 15
School icon by IconPai from the Noun Project.
Office icon by monkik from the Noun Project.
Park icon by angelina from the Noun Project.
PAGE 16
iStock by Getty Images. Photo ID: 1180889991. Photo Credit: passion4nature
Banner icon by TS Graphics from the Noun Project.
PAGE 17
Banner icon by TS Graphics from the Noun Project.
iStock by Getty Images. Stock photo ID: 1209712758. Photo Credit: Katie Wintersgill.
PAGE 18
iStock by Getty Images. Photo ID: 978191082. Photo Credit: Panupat Ratanawechtrakul.
Shutterstock. Photo ID: 1165636810. Photo Credit: Steve Heap.
Policy icon by Adrien Coquet from the Noun Project.
Price by Alice Design from the Noun Project.
"Save them to knock them back down.... who are we protecting?! The industry or the children that are our future??" taken by Rebecca Lenzi on October 26, 2018 in Hermitage, PA. Provided by Counter Tools.
PAGE 19
"Along the Durham Pride Parade Route" taken by Nina Baltierra in Durham, NC on September 29, 2018. Provided by Counter Tobacco.
Banner icon by TS Graphics from the Noun Project.
PAGE 20
iStock by Getty Images. Photo ID: 1196354649. Photo Credit: Roger Mechan.
Banner icon by TS Graphics from the Noun Project.
PAGE 21
iStock by Getty Images. Stock photo ID: 1179923359. Photo Credit: MIND_AND_I.
Photo Credit: Campaign for Tobacco Free Kids.
PAGE 22
Banner icon by TS Graphics from the Noun Project.
Photo by Mika Baumeister on Unsplash.
PAGE 23
iStock by Getty Images. Photo ID: 1172743212. Photo Credit: jetcityimage.
Banner icon by TS Graphics from the Noun Project.
PAGE 24
Banner icon by TS Graphics from the Noun Project.
iStock by Getty Images. Photo ID: 1180321075. Photo Credit: eurobanks.
PAGE 25
Massachusetts Attorney General Maura Healey and anti-vaping activists. Photo Credit: John Tlumacki, Globe Staff. The Boston Globe.
PAGE 26
Photo by CDC on Unsplash.

DESIGN TEAM: EMILY GVINO, HANNAH PRENTICE-DUNN