



Perspective

Regulating Vaping — Policies, Possibilities, and Perils

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Smoking rates peaked in the United States in the mid 1960s and have since declined to historically low levels. In contrast, use of e-cigarettes has recently soared, particularly among young

people. In 2019, more than 27% of high school students reported using e-cigarettes during the past month, as compared with about 6% who reported using combustible cigarettes.¹ Use of Juul products accounts for much of the doubling of vaping rates between 2017 and 2019, and these products represent 75% of the multi-billion-dollar e-cigarette market. The growth in vaping among young people has alarmed policymakers and many others.

Federal and state governments have implemented numerous policies to combat the growth of vaping. To promote the health of the population, however, policies should protect young people without diminishing the ability of e-cigarettes to help adult smokers transition away from more harmful combustible cigarettes or to

serve as a cessation aid for people attempting to quit smoking. This tension presents a quandary for policymakers, since vaping policies often promote one goal at the expense of the other. Furthermore, the facts that certain state and federal policies complement, substitute for, or undermine each other and that some federal policies supersede state policies add another layer of complexity to policymaking in this arena.

Because e-cigarettes vaporize liquid instead of burning tobacco, they are generally thought to be less harmful than combustible cigarettes.² However, the long-term health effects of inhaling liquid flavoring chemicals and nicotine are unknown.

Juul is a cartridge (“pod”) type of e-cigarette — it is a reusable, rechargeable device that holds a

liquid-containing pod, rather than a refillable open-tank system or a disposable device. Juul pods contain higher levels of nicotine than many other e-cigarette products, which makes them a better substitute for combustible cigarettes for smokers. However, high nicotine levels increase the risk of addiction among young people and can harm their cognitive development. Vaping e-cigarettes adulterated with tetrahydrocannabinol (THC) and vitamin E acetate recently caused an outbreak of acute lung disease and deaths.³ Although these harms are seemingly linked to the addition of THC and to the use of e-cigarettes obtained from informal sources rather than to e-cigarettes in general, these complications heighten concerns about e-cigarettes.

State and federal policymakers are focusing on two key policies for preventing vaping among young people: minimum sales age laws that restrict the sale of e-cigarettes to adolescents and bans on flavored e-cigarettes. Some states

State e-Cigarette Regulations by Type.*					
State	Flavor Ban Passed	Tax on e-Cigarettes	State	Flavor Ban Passed	Tax on e-Cigarettes
AL			MT	X	
AK			NE		
AZ			NV		X
AR			NH		X
CA		X	NJ	X	X
CO			NM		X
CT		X	NY	X	X
DE		X	NC		X
DC		X	ND		
FL			OH		X
GA			OK		
HI			OR	X	
ID			PA		X
IL		X	RI	X	
IN			SC		
IA			SD		
KS		X	TN		
KY			TX		
LA		X	UT	X	
ME		X	VT		X
MD			VA		
MA	X	X	WA	X	X
MI	X		WV		X
MN		X	WI		X
MS			WY		
MO			Totals	9	22

* Flavor ban information is as of February 2020. The Massachusetts flavor ban applies to all tobacco products; it is already in effect for e-cigarettes and will go into effect for other products on June 1, 2020. The New Jersey flavor ban applies to e-cigarettes and is effective as of April 20, 2020; New Jersey previously restricted the sale of flavored cigarettes, excluding menthol and clove flavors. Michigan, Montana, New York, Oregon, and Utah issued emergency rules to temporarily ban the sale of flavored e-cigarettes, but they are on hold pending legal challenges. Information is from the Public Health Law Center at the Mitchell Hamline School of Law, the Campaign for Tobacco-Free Kids, and Breathe New Hampshire.

have also implemented e-cigarette taxes (see table).

In December 2019, Congress passed so-called Tobacco 21 legislation, which immediately sets a federal minimum age of 21 for purchasing tobacco products, including e-cigarettes. Twenty-four

states and the District of Columbia had enacted policies that set the minimum age for purchasing e-cigarettes at either 19 or 21; in other states, the minimum age was 18.

Because most tobacco use begins before 19 years of age, the

new federal law has the potential to dramatically reduce current tobacco use among young people and prevent some people from ever using tobacco. However, enforcing bans on sales to minors is difficult in retail locations and even more so online, and young people often obtain e-cigarettes from family members and friends. To reduce access to e-cigarettes among young people, federal and state governments could increase funding for enforcement efforts and collaborate to find better ways to prevent sales to young people in stores and online.

Another important policy is banning flavored e-cigarettes. Because flavors are more attractive to young people than to adults, a flavor ban could reduce the appeal of e-cigarettes for young people without diminishing their role in harm reduction for adult smokers. Nine states have passed flavor bans, but most have been short-term emergency bans or have been blocked by legal challenges.

In December 2019, the Food and Drug Administration (FDA) announced that it will use its market-review authority to essentially ban all flavors except tobacco and menthol in cartridge (pod-based) e-cigarettes. These changes became effective in February 2020. Disposable e-cigarettes and e-liquids for open-tank-system e-cigarettes typically sold in vape shops are not covered by the policy. The effect of the ban may be limited because of these important exemptions.

Banning all flavors in all tobacco products with few or no exemptions could be more effective than the current narrow ban for several reasons.^{4,5} First, menthol cigarettes, which remain on the market, have been shown to be ap-

peeling to young people. Second, although young people prefer fruit- and candy-flavored pods to menthol-flavored pods, the latter might become more attractive if they are the only flavored pods available. Third, under the current ban, young people may switch to e-cigarettes that are still permitted to contain flavoring. Indeed, adolescents have recently been favoring new flavored, disposable e-cigarettes that resemble Juul devices but have higher nicotine concentrations and cost less.

Another concern is that it is unclear how committed the FDA is to enforcing the flavor ban for cartridge e-cigarettes. The agency has largely declined to act on its authority to regulate e-cigarettes and to fulfill an obligation established by Congress to force products that do not protect public health, such as Juul devices, off the market. State bans on flavored e-cigarettes may therefore still be important.

A final policy is taxation of e-cigarettes. Twenty-one states and the District of Columbia tax both e-cigarettes and combustible cigarettes; the federal government taxes only combustibles.

The effects of such taxes on public health are complicated for several reasons. Levying taxes on e-cigarettes raises their price, thereby deterring some people from vaping. However, such taxes will also drive some vapers toward smoking, since taxes tend to increase the price of e-cigarettes relative to the price of combustibles.^{4,5} Consequently, the tax rate on e-cigarettes should be set so that it is cheaper to vape than to smoke. Determining optimal tax rates is complicated by the mul-

tiply types of e-cigarettes available, the fact that devices and pods are often bought separately, and the ability of companies — not the government — to set prices. Furthermore, too high a tax on e-cigarettes will encourage vaping of lower-priced or black-market e-cigarettes, thus undermining the benefits of the tax.

Given these considerations and the lack of evidence regarding how people respond to taxes on e-cigarettes, it may be preferable to rely on greater enforcement of Tobacco 21 policies and flavor bans to prevent vaping among young people. The appeal of tax revenue, however, may be too strong for governments to resist.

But at what level of government — state or federal — should e-cigarette policies be implemented? There are several advantages to states taking the lead. States may be more nimble regulators than the federal government, each state can regulate to meet its own needs, and state policies can serve as experiments and generate useful evidence. State laws can fill voids when federal regulations are absent or ineffective. States can also provide an impetus for federal action by demonstrating nationwide political will, as they did by passing Tobacco 21 laws. However, differing state policies risk leaving young people in some states unprotected and promoting the flow of e-cigarettes across state lines.

On the other hand, implementing regulations at the federal level has potential advantages over relying on state-based regulation of e-cigarettes because of the broad reach of national policies and their capacity to reduce trafficking

across state borders. Nevertheless, as compared with states, the federal government has been slow to implement certain regulations.

Soaring rates of vaping among young people and associated problems have resulted in great urgency and important challenges for policymakers. Despite the urgency, policies should be evidence-based and thoughtfully designed. They require effective, collaborative, and well-funded enforcement by federal and state governments. Policymakers should aim to reduce vaping among young people while maintaining avenues to help smokers quit. Finally, policies should be forward-thinking, since the e-cigarette market is rapidly changing and e-cigarette companies can be more agile than regulators.

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