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R STREET POLICY STUDY NO. 74
November 2016

VAPESCORE 2016: REGULATING VAPOR PRODUCTS IN U.S. CITIES

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INTRODUCTION

Americans' use of tobacco cigarettes has declined over the past decade from 20.9 percent of adults in 2004 to 16.8 percent of adults in 2014. For perspective on the longer-term trend, the U.S. smoking rate is down from a high of 42.4 percent in 1965, when the Centers for Disease Control and Prevention first began collecting data.¹

Some of the credit for these falling rates should go to cigarette taxes, which have provided an effective price signal encouraging smokers to quit. But while that effect may have been the original goal, for cities and states that have gotten hooked on the revenue from these excise taxes, the falling smoking rates prove to be a mixed blessing. Many have responded by raising cigarette taxes further, sometimes exponentially so.²

1. National Center for Chronic Disease Prevention and Health Promotion Office on Smoking and Health, "Trends in Current Cigarette Smoking Among High School Students and Adults, United States, 1965–2014," Centers for Disease Control and Prevention, March 30, 2016. http://www.cdc.gov/tobacco/data_statistics/tables/trends/cig_smoking/

2. Ann Boonn, "Cigarette Taxes By State Per Year 2000-2016," Campaign for Tobacco-Free Kids, July 14, 2016. <https://www.tobaccofreekids.org/research/factsheets/pdf/0275.pdf>

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As California state Sen. Mike McGuire, D-Healdsburg, put it in reference to this year's Proposition 56 ballot measure to raise the state's tobacco taxes dramatically:

California has one of the lowest tobacco taxes in the nation, currently ranking 35th with a tax of 87 cents – even Texas has higher tobacco taxes than California. ... Nearly 40,000 Californians die every year from smoking and tobacco-related diseases. Tobacco use continues to be a public health crisis and we know that the most effective way to reduce smoking, especially among young people, is the price point for a pack of cigarettes.³

Politicians commonly make arguments similar to McGuire's as justification for tobacco tax hikes. But if improving public health is, in fact, the primary objective, we need to ask whether current public policies actually advance that goal. Specifically, when it comes to newer nicotine-delivery products like e-cigarettes, the question needs to be raised whether current efforts to subject them to the same tax and regulatory systems as cigarettes might potentially undermine less harmful alternatives for smokers.

Tobacco and nicotine products exist on a continuum of harm. On one end are traditional combustible cigarettes, which do by far the most damage, and on the other are smoking-cessation products, such as pharmaceutical patches, gums and lozenges, which do little damage and aid some smokers in quitting the habit.

Though many smokers have used them to cease or substantially cut down their smoking, by law, e-cigarettes and similar products may not be marketed as "cessation" products without express permission from the Food and Drug

3. Press release, "Senate approves bill that will allow local voters to pass their own tobacco tax," California State Senate Majority Caucus, March 10, 2016. <http://sd02.senate.ca.gov/news/2016-03-10-senate-approves-bill-will-allow-local-voters-pass-their-own-tobacco-tax>

Administration. But much like the cessation devices, and unlike cigarettes, vapor products and e-cigarettes do not combust and consequently produce no tar or smoke. The absence of smoke makes these electronic nicotine-delivery systems substantially less hazardous, not only to the user, but also to third parties, and thus less of a threat to the general welfare of the nonsmoking public.

If the goal of tobacco policy is to reduce public harm, then alternative products that move smokers away from cigarettes should receive favorable treatment under the law. Most jurisdictions, for example, tax cigarettes at a much higher rate than nicotine gums and patches. Such policies recognize that the inhaled smoke from cigarettes does far more harm to consumers' health than the nicotine.

This approach has been taken in the United Kingdom with respect to e-cigarettes, where public-health authorities recognize that vapor products are a less harmful alternative to traditional cigarettes. As Public Health England reported last year:

The comprehensive review of the evidence finds that almost all of the 2.6 million adults using e-cigarettes in Great Britain are current or ex-smokers, most of whom are using the devices to help them quit smoking or to prevent them going back to cigarettes. It also provides reassurance that very few adults and young people who have never smoked are becoming regular e-cigarette users (less than 1 percent in each group). U.S. studies and research mostly confirm similar findings about the value of e-cigarettes in smoking reduction and cessation, including a meta-analysis of six studies from last year.⁴

But the temptation to treat vapor products as equivalent to cigarettes—especially with respect to revenue-generating taxes—may grow even stronger as more smokers make the switch. According to estimates by BIS Research, a marketing strategy firm, the global e-cigarette industry will grow more than 22.36 percent from 2015 to 2025, when it is expected to be a \$50 billion global industry.⁵

Over the past year, the R Street Institute has examined the tax and regulatory environments for e-cigarettes and nicotine-vapor products across 52 major American cities, evaluating the degree to which each promotes a harm-reduction approach to tobacco. We focus specifically on currently avail-

able vapor products that most nearly replicate the smoking experience, but without the harmful tar and other chemicals that cause cancer and a host of other smoking-related diseases.

We hope this analysis of the evolving policy landscape for vapor products at the local level helps to illuminate policy considerations that should guide cities and states toward regulatory frameworks that improve public health by reducing tobacco harm.

VAPEScore METHODOLOGY

This report takes a snapshot of the legal and regulatory climates for nicotine-vapor devices in 52 U.S. cities. The assessments measure both state and local requirements, as both can have significant impact. A detailed description of the methodology follows.

We looked at four key policy areas. Each city started with a base score of 95. Points were added or deducted based on the following questions:

1. Does the city impose environmental restrictions for vapor products in a manner inconsistent with tobacco harm reduction?

Cities could lose as many as -25 points based on the presence of vaping prohibitions that affect, for example, enclosed workspaces, restaurants, bars, e-cigarette shops and other notable public spaces. Cities also lost points for the extent to which vapor products are treated as equivalent to cigarettes. Nicotine vapor is categorically distinct from tobacco smoke, but many jurisdictions treat them the same under the law.

We weighted restrictions on vapor use in workplaces and restaurants as less problematic than prohibitions in bars and e-cigarette shops. Modest deductions of less than -10 points were assigned to cities with no or few restrictions—perhaps only affecting large workspaces—while larger deductions were made for cities with more extensive restrictions, including those that affect restaurants and other public places. In general, cities with more extensive restrictions tended to ban vaping everywhere that smoking is banned—sometimes with a small bounded exception—thus effectively treating vapor products and cigarettes as equivalent.

The maximum deduction of -25 points was reserved for cities with a complete ban on public vaping, including bans inside e-cigarette shops and adult tobacco bars – locations that otherwise could provide smokers an opportunity to try less harmful alternatives.

2. What, if any, taxes are imposed on vapor products and how do they compare with tobacco cigarette taxes?

Cities were deducted up to -25 points for the breadth and size of local taxes on vaping products, as well as for failing to dis-

4. Muhammad Aziz Rahman, Nicholas Hann, Andrew Wilson, George Mnatzaganian and Linda Worrall-Carter, "E-cigarettes and Smoking Cessation: Evidence from a Systemic Review and Meta-Analysis," *PLoS One*, 10(3): e0122544, March 30, 2015. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4378973/>

5. BIS Research, "Electronic Cigarette & E Vapor (Vaporizer) Market Research Reports," 2016. <http://bisresearch.com/industry-report/electronic-cigarette-market-size-forecast.html>

tinguish between vaping products and cigarettes. No deductions were taken if a city has yet to impose an excise tax on vapor products or is agnostic on collection and responsibility.

Cities that do tax nicotine-vapor products could avoid deductions if (a) the tax is minimal (b) the tax legislation distinguishes vapor products as less harmful than combustible tobacco products and (c) the tax is tailored to encourage smokers to switch from cigarettes to vapor products. To make the different ways of levying taxes commensurate, we took a basket of common vapor products and compared their specific tax levies.

Cities that tax vapor products tend to levy them in one of two ways: a per-unit or “specific” tax, based on the volume of e-liquid or as an ad valorem tax assessed based on a percentage of the product’s sale price. Unlike per-unit taxes, ad valorem taxes treat vapor products disparately, as they affect disposable e-cigarettes more than they do purely fluid-based products, such as e-liquid cartridges, tanks and bottles. All else being equal, ad valorem taxes would tend to be more punitive, as the tax also applies to the value of the vapor device, and not just the fluid. However, depending on specific tax levels, they do not always constitute a larger disincentive to switching from smoking to vaping.

We penalized cities most heavily for having both a significant tax on vapor products and for taxing them equivalently to cigarettes. Of these two aspects, we weighted the size of the excise tax on vaping products more heavily than the similarity of the vapor tax to the cigarette tax. Thus, a city with a high tax on vapor products but an inordinately high tax on cigarettes is penalized more heavily than a city that has a much smaller vapor tax, though one that is roughly equal in size to its cigarette tax.

3. Are there additional licensing requirements to sell vapor products?

We assessed deductions of as many as -6 points for cities that impose additional licensing requirements—separate and apart from those required by the FDA—to sell e-cigarettes, vapor products or other nonpharmaceutical nicotine-delivery products within venues designed for adult patrons. These most commonly take the form of additional over-the-counter licensing requirements and vending-machine licenses.

Licenses that aren’t either actively monitored or demonstrative of some sort of expertise serve as little more than taxes by another name. Such provisions increase costs for consumers, create additional hassle for retailers and distributors, and generally place an unnecessary drag on the vapor marketplace.

As a point of clarification, the customization of vapor products by vape shops is not usually considered “manufacturing” and thus is not subject to licensing.

4. Are there any additional factors that create a regulatory or economic disincentive to switch from tobacco cigarettes to vapor products?

We awarded cities up to +5 additional points for having a notably favorable regulatory climate for vapor products. Additional points were awarded to cities that both haven’t been hostile to tobacco harm reduction over the past three years and that affirmatively have taken local action to reduce cigarette-related addiction, illness and death.

By contrast, a city could lose up to -10 points for misleading public-information campaigns within the last three years, with deductions at the higher end of that range for campaigns that were especially broad in scope or that came from highly placed authorities. Deductions within that range also were made for cities that have seen proposed harmful legislation or enacted additional legislation—not covered by our other metrics—that is nonetheless inconsistent with tobacco harm reduction.

ENVIRONMENTAL PROHIBITIONS

Our research revealed a broad array of regulatory restrictions that affect the legality of using vaping products in enclosed workspaces, restaurants, bars and e-cigarette shops. Deductions were assessed for notable prohibitions and for the extent to which vaping is treated as equivalent to cigarettes. Modest deductions (less than -10 points) were assigned to cities either with no restrictions or whose restrictions were limited to, e.g., large workspaces. Large deductions were charged to cities with more extensive restrictions, including restaurants and other public places.

The maximum deduction of -25 was reserved for cities with a complete ban on public vaping, while cities with slightly smaller deductions (-18 to -22 points) generally have only a few locations where people can vape without restrictions, such as e-cigarette shops or adult smoking bars.

In our rankings, 13 of the 52 cities were charged the highest deduction, for policies that broadly prohibit vapor use on par with cigarettes, including in vape shops. The average deduction assessed to cities in this category was -10 points.

For example, Boston received the maximum deduction, due to its rules banning vaping everywhere smoking is banned, including tobacco bars and e-cigarette shops. New York scored slightly better, in that its ban permits vapor use in e-cigarette shops.

TABLE I: ENVIRONMENTAL PROHIBITIONS (0 TO -25)

CITY	ADJUSTMENT		
Albuquerque	0.0	Memphis	-10.0
Atlanta	-3.0	Mesa	0.0
Austin	0.0	Miami	-14.0
Baltimore	-4.0	Milwaukee	-2.0
Birmingham	0.0	Minneapolis	-22.0
Boston	-25.0	Nashville	-10.0
Charlotte	0.0	New Orleans	-19.0
Chicago	-19.0	New York	-19.0
Cleveland	0.0	Oakland	-25.0
Colorado Springs	0.0	Oklahoma City	-4.0
Columbus	0.0	Omaha	0.0
Dallas	0.0	Orlando	-2.0
Denver	0.0	Philadelphia	-18.0
Detroit	-4.0	Phoenix	0.0
El Paso	-25.0	Portland	-25.0
Fort Worth	-2.0	Raleigh	-3.0
Fresno	-25.0	Sacramento	-25.0
Houston	0.0	San Antonio	0.0
Indianapolis	-25.0	San Diego	-25.0
Jacksonville	-2.0	San Francisco	-25.0
Kansas City	-19.0	San Jose	-25.0
Las Vegas	-3.0	Seattle	-25.0
Long Beach	-25.0	Tucson	0.0
Los Angeles	-25.0	Tulsa	-4.0
Louisville	-3.0	Virginia Beach	-3.0
		Washington	-4.0
		Wichita	0.0
		MEDIAN	-4.00
		AVERAGE	-9.96
		STD DEV	10.62

At the other end of the spectrum, Omaha and 15 other cities had no restrictions on vapor products, while maintaining significant environmental restrictions on cigarettes. Better-scoring cities generally fostered a policy environment that encourages smokers to switch to vapor products.

EXCISE TAXES

Properly calibrated excise taxes are critical to placing vapor products in their proper place along the tobacco harm continuum. Because these taxes send price signals to consumers, they have the potential to have a meaningful impact on whether smokers switch to less harmful alternatives.

There were no deductions where a city has yet to impose an excise tax on vapor products or is agnostic on collection or responsibility. Deductions were assessed for the relative size of the excise tax on vapor products and for having small or no differences in taxes between vapor products and cigarettes (for treating them as roughly equivalent products).

Contrary to a common impression, most cities we examined do not impose excise taxes on nicotine-vapor products. Only eight of the 52 cities analyzed currently have a vapor excise tax. That’s likely due to the relatively recent popularity of vapor, but it does mean our rankings could change significantly as more jurisdictions take up the issue. When one includes proposed and failed legislation, more than two-thirds of the observed cities have considered implementing an excise tax on vapor products. Because so many cities haven’t imposed excise taxes on vapor, the average deduction assessed to cities in this category is a notably low -1.65 points.

The worst city in our scoring was Minneapolis, with a tax equal to 95 percent of the wholesale price of vapor products. This tax is identical to that placed on tobacco products other than cigarettes (pipe tobacco, smokeless products, etc.) and is actually higher than the parallel tax on cigarettes (90.1 percent of an average pack price of \$3.33). That is, the city’s

TABLE 2: EXCISE TAXES (0 TO -25)

CITY	ADJUSTMENT		
Albuquerque	0.0	Mesa	0.0
Atlanta	0.0	Miami	0.0
Austin	0.0	Milwaukee	0.0
Baltimore	0.0	Minneapolis	-25.0
Birmingham	0.0	Nashville	0.0
Boston	0.0	New Orleans	0.0
Charlotte	0.0	New York	0.0
Chicago	-18.0	Oakland	0.0
Cleveland	0.0	Oklahoma City	0.0
Colorado Springs	0.0	Omaha	0.0
Columbus	0.0	Orlando	0.0
Dallas	0.0	Philadelphia	-14.0
Denver	0.0	Phoenix	0.0
Detroit	0.0	Portland	0.0
El Paso	0.0	Raleigh	0.0
Fort Worth	0.0	Sacramento	0.0
Fresno	0.0	San Antonio	0.0
Houston	0.0	San Diego	0.0
Indianapolis	0.0	San Francisco	0.0
Jacksonville	0.0	San Jose	0.0
Kansas City	0.0	Seattle	0.0
Las Vegas	0.0	Tucson	0.0
Long Beach	0.0	Tulsa	0.0
Los Angeles	0.0	Virginia Beach	0.0
Louisville	0.0	Washington	-23.0
Memphis	0.0	Wichita	-6.0
		MEDIAN	0.00
		AVERAGE	-1.65
		STD DEV	5.54

excise tax environment inexplicably creates an economic disincentive to move away from cigarettes.

Chicago fared slightly better than Minneapolis, in that it discourages cigarettes relative to vapor products, but only by taxing cigarettes at an exorbitant level (\$6.16/pack). Thus, even with a relatively high tax on vapor products, the government-imposed burden remains significantly less than the one placed on cigarettes.

Three cities—New Orleans and the two North Carolina cities of Charlotte and Raleigh—received no deductions, even though they do impose excise taxes. In all three, the excise tax on e-liquids is just \$0.05 per milliliter. Moreover, the excise tax on cigarettes is sufficiently high in each city to distinguish them as more harmful and thus discourage cigarette smoking.

LICENSING

Of the 52 cities in our analysis, 41 imposed additional licenses for over-the-counter and vending-machine sales of vapor products. Such licenses require routine payments to state and local governments, but do not typically require any specialized knowledge or active compliance. Rules requiring vendors to apply age-verification laws, maintain basic business licenses and collect applicable taxes are all independent of the licensing requirement, thus rendering licensing a needless barrier to vapor products in the marketplace. The average deduction in this category was just -4.56 points.

Of the cities analyzed, 11 didn't require additional licensing beyond a retail sales-tax license. The remaining cities required some additional licensure. Consumers in most cities would be wise to raise questions as to whether these requirements serve any real policy purpose other than as hidden taxes.

TABLE 3: LICENSING (0 TO -6)

CITY	ADJUSTMENT
Albuquerque	0.0
Atlanta	-6.0
Austin	-6.0
Baltimore	-6.0
Birmingham	-6.0
Boston	-6.0
Charlotte	-5.0
Chicago	-1.0
Cleveland	-6.0
Colorado Springs	0.0
Columbus	-6.0
Dallas	-6.0
Denver	0.0
Detroit	-5.0
El Paso	-6.0
Fort Worth	-6.0
Fresno	-6.0
Houston	-6.0
Indianapolis	-6.0
Jacksonville	-6.0
Kansas City	0.0
Las Vegas	-6.0
Long Beach	-6.0
Los Angeles	-6.0
Louisville	-5.0
Memphis	0.0
Mesa	0.0
Miami	-6.0
Milwaukee	-6.0
Minneapolis	-6.0
Nashville	0.0
New Orleans	-6.0
New York	-6.0
Oakland	-6.0
Oklahoma City	-6.0
Omaha	-6.0
Orlando	-6.0
Philadelphia	-6.0
Phoenix	0.0
Portland	0.0
Raleigh	-5.0
Sacramento	-6.0
San Antonio	-6.0
San Diego	-6.0
San Francisco	-6.0
San Jose	-6.0
Seattle	-6.0
Tucson	0.0
Tulsa	-6.0
Virginia Beach	0.0
Washington	-6.0
Wichita	-6.0
MEDIAN	-6.00
AVERAGE	-4.56
STD DEV	2.49

HARM REDUCTION CLIMATE

While our research largely focused on empirical metrics, we also needed a way to address relevant issues—legislative or otherwise—that didn’t fit neatly into any single category. Accordingly, we developed a measure of the effectiveness of local policies and actions to encourage tobacco harm reduction as a strategy to combat cigarette-related addiction, illness and death.

This effort included, but was not limited to, examining government-sponsored public information campaigns about the relative health impacts of vapor products. Conversely, in the category of unhelpful public information, we looked for statements by local public officials that suggested vapor products are just as harmful to public health as cigarettes.

We awarded or subtracted points based on helpful or, conversely, misleading public information; additional legislation

on the books locally; harmful proposed legislation; and the general local climate toward vaping. The average deduction for this category was -2.3 points.

An overview of local conversations about vaping revealed a relatively “immature” policy environment. City officials mostly have remained silent on the issue and local jurisdictions largely do not officially recognize vapor products. Nonetheless, some cities demonstrate hostile environments, with Minneapolis again scoring the worst. The city has conducted a misleading public-education campaign suggesting that vaping is as harmful as smoking. Vapor products also are included in at least one definition of “tobacco product” under Minnesota law, meaning that, where that definition is relevant, vapor products are treated the same as cigarettes.

On the other end of the spectrum were two bright spots. In Kansas City, the Missouri Community Options and Resources

TABLE 4: HARM REDUCTION CLIMATE (+5 TO -10)

CITY	ADJUSTMENT
Albuquerque	-1.0
Atlanta	0.0
Austin	0.0
Baltimore	0.0
Birmingham	0.0
Boston	-9.0
Charlotte	-4.0
Chicago	-1.0
Cleveland	-1.0
Colorado Springs	-4.0
Columbus	-1.0
Dallas	0.0
Denver	-4.0
Detroit	-8.0
El Paso	0.0
Fort Worth	0.0
Fresno	-7.0
Houston	0.0
Indianapolis	-3.0
Jacksonville	-2.0
Kansas City	+2.0
Las Vegas	-1.0
Long Beach	-7.0
Los Angeles	-7.0
Louisville	0.0
Memphis	0.0
Mesa	-1.0
Miami	-2.0
Milwaukee	0.0
Minneapolis	-10.0
Nashville	0.0
New Orleans	0.0
New York	-2.0
Oakland	-7.0
Oklahoma City	0.0
Omaha	0.0
Orlando	-2.0
Philadelphia	0.0
Phoenix	-1.0
Portland	-4.0
Raleigh	-4.0
Sacramento	-7.0
San Antonio	0.0
San Diego	-7.0
San Francisco	-7.0
San Jose	-7.0
Seattle	-6.0
Tucson	-1.0
Tulsa	0.0
Virginia Beach	+5.0
Washington	0.0
Wichita	0.0
MEDIAN	-1.00
AVERAGE	-2.33
STD DEV	3.23

(MOCOR), as well as other harm-reduction and anti-smoking groups, historically have tended to see vaping in a neutral to positive light. This contrasts with public-health groups active in many other cities. Virginia Beach benefited from a 2010 court ruling that the commonwealth’s smoking ban does not apply to e-cigarettes. Thanks to that decision, the state explicitly acknowledges nicotine-vapor products and cigarettes as distinct products. Neither Kansas City nor Virginia Beach have otherwise demonstrated overt hostility toward vapor products, such as through advocacy campaigns or misleading comments from local or state officials.

OVERALL RESULTS

For the 52 cities in our sample, the average overall score was 76.5, equivalent to a letter grade of C. The median score was 85, equivalent to a letter grade of B. The standard deviation of the scores was 15.3, indicating a rather wide variance in scoring.

TABLE 5: OVERALL RESULTS

CITY	BASE	ENVIRONMENTAL	EXCISE	LICENSE	CLIMATE	TOTAL	LETTER
Albuquerque	95	0.0	0.0	0.0	-1.0	94.0	A
Atlanta	95	-3.0	0.0	-6.0	0.0	86.0	B
Austin	95	0.0	0.0	-6.0	0.0	89.0	B+
Baltimore	95	-4.0	0.0	-6.0	0.0	85.0	B
Birmingham	95	0.0	0.0	-6.0	0.0	89.0	B+
Boston	95	-25.0	0.0	-6.0	-9.0	55.0	F
Charlotte	95	0.0	0.0	-5.0	-4.0	86.0	B
Chicago	95	-19.0	-18.0	-1.0	-1.0	56.0	F
Cleveland	95	0.0	0.0	-6.0	-1.0	88.0	B+
Colorado Springs	95	0.0	0.0	0.0	-4.0	91.0	A-
Columbus	95	0.0	0.0	-6.0	-1.0	88.0	B+
Dallas	95	0.0	0.0	-6.0	0.0	89.0	B+
Denver	95	0.0	0.0	0.0	-4.0	91.0	A-
Detroit	95	-4.0	0.0	-5.0	-8.0	78.0	C+
El Paso	95	-25.0	0.0	-6.0	0.0	64.0	D
Fort Worth	95	-2.0	0.0	-6.0	0.0	87.0	B+
Fresno	95	-25.0	0.0	-6.0	-7.0	57.0	F
Houston	95	0.0	0.0	-6.0	0.0	89.0	B+
Indianapolis	95	-25.0	0.0	-6.0	-3.0	61.0	D-
Jacksonville	95	-2.0	0.0	-6.0	-2.0	85.0	B
Kansas City	95	-19.0	0.0	0.0	+2.0	78.0	C+
Las Vegas	95	-3.0	0.0	-6.0	-1.0	85.0	B
Long Beach	95	-25.0	0.0	-6.0	-7.0	57.0	F
Los Angeles	95	-25.0	0.0	-6.0	-7.0	57.0	F
Louisville	95	-3.0	0.0	-5.0	0.0	87.0	B+
Memphis	95	-10.0	0.0	0.0	0.0	85.0	B
Mesa	95	0.0	0.0	0.0	-1.0	94.0	A
Miami	95	-14.0	0.0	-6.0	-2.0	73.0	C
Milwaukee	95	-2.0	0.0	-6.0	0.0	87.0	B+
Minneapolis	95	-22.0	-25.0	-6.0	-10.0	32.0	F
Nashville	95	-10.0	0.0	0.0	0.0	85.0	B
New Orleans	95	-19.0	0.0	-6.0	0.0	70.0	C-
New York	95	-19.0	0.0	-6.0	-2.0	68.0	D+
Oakland	95	-25.0	0.0	-6.0	-7.0	57.0	F
Oklahoma City	95	-4.0	0.0	-6.0	0.0	85.0	B
Omaha	95	0.0	0.0	-6.0	0.0	89.0	B+
Orlando	95	-2.0	0.0	-6.0	-2.0	85.0	B
Philadelphia	95	-18.0	-14.0	-6.0	0.0	57.0	F
Phoenix	95	0.0	0.0	0.0	-1.0	94.0	A
Portland	95	-25.0	0.0	0.0	-4.0	66.0	D
Raleigh	95	-3.0	0.0	-5.0	-4.0	83.0	B

Sacramento	95	-25.0	0.0	-6.0	-7.0	57.0	F
San Antonio	95	0.0	0.0	-6.0	0.0	89.0	B+
San Diego	95	-25.0	0.0	-6.0	-7.0	57.0	F
San Francisco	95	-25.0	0.0	-6.0	-7.0	57.0	F
San Jose	95	-25.0	0.0	-6.0	-7.0	57.0	F
Seattle	95	-25.0	0.0	-6.0	-6.0	58.0	F
Tucson	95	0.0	0.0	0.0	-1.0	94.0	A
Tulsa	95	-4.0	0.0	-6.0	0.0	85.0	B
Virginia Beach	95	-3.0	0.0	0.0	+5.0	97.0	A+
Washington	95	-4.0	-23.0	-6.0	0.0	62.0	D-
Wichita	95	0.0	-6.0	-6.0	0.0	83.0	B
MEDIAN		-4.00	0.00	-6.00	-1.00	85.00	B
AVERAGE		-9.96	-1.65	-4.56	-2.33	76.50	C
STD DEV		10.62	5.54	2.49	3.23	15.30	

The top overall Vapescore of 97, for a grade of A+, went to Virginia Beach, Virginia. Across the board, the city embraces policies conducive to tobacco harm reduction. As mentioned earlier, it's helped greatly by a 2010 state Supreme Court ruling that recognizes the distinction between vapor and traditional cigarettes. Virginia Beach was the only city to do better than the base score of 95. Following close behind were Albuquerque, New Mexico and three Arizona cities: Mesa, Phoenix and Tucson. Each finished with a score of 94.

On the other end of the scoring spectrum were 13 cities that received failing Vapescore grades, with scores below 60. The worst city by a significant margin was Minneapolis. The city, state and county regulations imposed within Minneapolis patently fail to recognize the potential of vapor products to reduce tobacco harm. Conditions are so bad that the city is home to a tax paradigm that actually favors cigarettes over vapor.

Chicago, Boston, Philadelphia and all the cities we ranked in California (whose results do not include the changes imposed by the recently approved Proposition 56) rounded out the bottom—each missing critical opportunities to craft tailored policies that recognize the potential of vapor products to reduce tobacco harm.

TRENDS

With relatively few cities actively addressing vapor in terms of tax policy, the jury is still out on how cities ultimately will treat nicotine-vapor products relative to cigarettes. Unsurprisingly, more politically conservative cities like Colorado Springs, Mesa and Tucson appear to have a more hands-off approach to vapor—possibly recognizing the different nature of the products.

As a state, California is on the verge of creating the most hostile climate for vaping in America. The cities in the state already suffer from the most strident environmental prohibitions for vapor in the Vapescore rankings. Add to that, the state is set to impose a substantial vapor tax through ballot Proposition 56, which passed in last week's general election. Many smokers in California won't have much of a policy incentive to move to less harmful alternatives.

Licensing emerged as an area where cities adopted harmful policies least connected to any reasonable policy objective. State, local and county governments already have many ways to enforce sound policies like youth vaping bans without constricting the market for vapor products. If they are interested in more revenue, they should be transparent about their intent with tax policy, rather than seeking to raise it through the backdoor of licensing.

CONCLUSION

Our first Vapescore analysis reveals a rapidly developing policy area rife with misinformation and heavily motivated by a political desire to replace declining cigarette revenues. We anticipate our scoring to change significantly in future iterations of Vapescore, as more state and local governments actively develop policies for emerging alternatives to cigarettes. We likely will need to address novel products, such as so-called "heat-not-burn" offerings, as they become available in the United States.

As vapor products and other less harmful alternatives to cigarettes gain a proportionally larger share of the marketplace, policymakers must carefully ensure that the quest for tax revenues doesn't undermine the laudable goal of improving public health. Rather than arbitrarily and unscientifically drawing the conclusion that cigarettes and vapor products

are equivalent, public officials should consider policies treat vapor products proportionally to their health impacts. In the process, they'd be wise to consider whether many of their policies related to tobacco harm really have the impacts they claim—or are simply creating a series of unfortunate unintended consequences.

ABOUT THE AUTHORS

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