



# E-CIGARETTES: A NEW THREAT TO YOUTH

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**Campaign for Tobacco Free Kids**

Delaware Cancer Consortium Retreat

4/16/2019



# Campaign for Tobacco-Free Kids

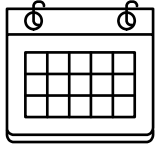
The **Campaign for Tobacco-Free Kids** is a leading force in the fight to reduce tobacco use and its deadly toll in the United States and around the world.

**Our vision:** A future free of the death and disease caused by tobacco.

We work to save lives by advocating for public policies that prevent kids from smoking, help smokers quit and protect everyone from secondhand smoke.



# Youth Advocacy Program



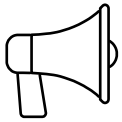
## Kick Butts Day

Large scale day of youth activism; rallying point.



## Youth Engagement Alliance

Adult Coordinator network dedicated to providing support, networking & technical assistance.



## National Youth Ambassadors

Youth action network composed of dedicated youth leaders from across the country serving as state leads. Youth Ambassadors kick off their year at the **Youth Advocacy Symposium** & receive ongoing training throughout the year.



## Youth Advocates of the Year Awards (YAYAs)

Exemplary youth advocates are honored and receive scholarships and grants to continue their work and serve as leaders in the tobacco control movement on a national stage.



## Youth Advocacy Training Program - Taking Down Tobacco

Comprehensive training program that educates, empowers & engages youth in the fight against tobacco through online & in-person trainings.



# Taking Down Tobacco

The **Taking Down Tobacco training program** educates, empowers and engages youth (ages 12-18) in the fight against tobacco through both online and in-person trainings.



<https://www.takingdowntobacco.org/>

Generously supported by:  
  
FOUNDATION





# Kick Butts Day

**Kick Butts Day** is a national day of activism that empowers youth to stand out, speak up and seize control against Big Tobacco. This year, Kick Butts Day focused attention on the need to reverse the skyrocketing youth use of Juul and other e-cigarettes, which have become by far the most popular tobacco products used by kids at over 1,000 events across the country.



<https://www.kickbuttsday.org/>



# Youth Engagement in Delaware

## Kick Butts Generation

- Delaware's statewide youth movement working to put an end to tobacco and nicotine use
- **Turquoise Takeover- May 2019**: KBG is taking action and turning Delaware turquoise to spread awareness about lung cancer



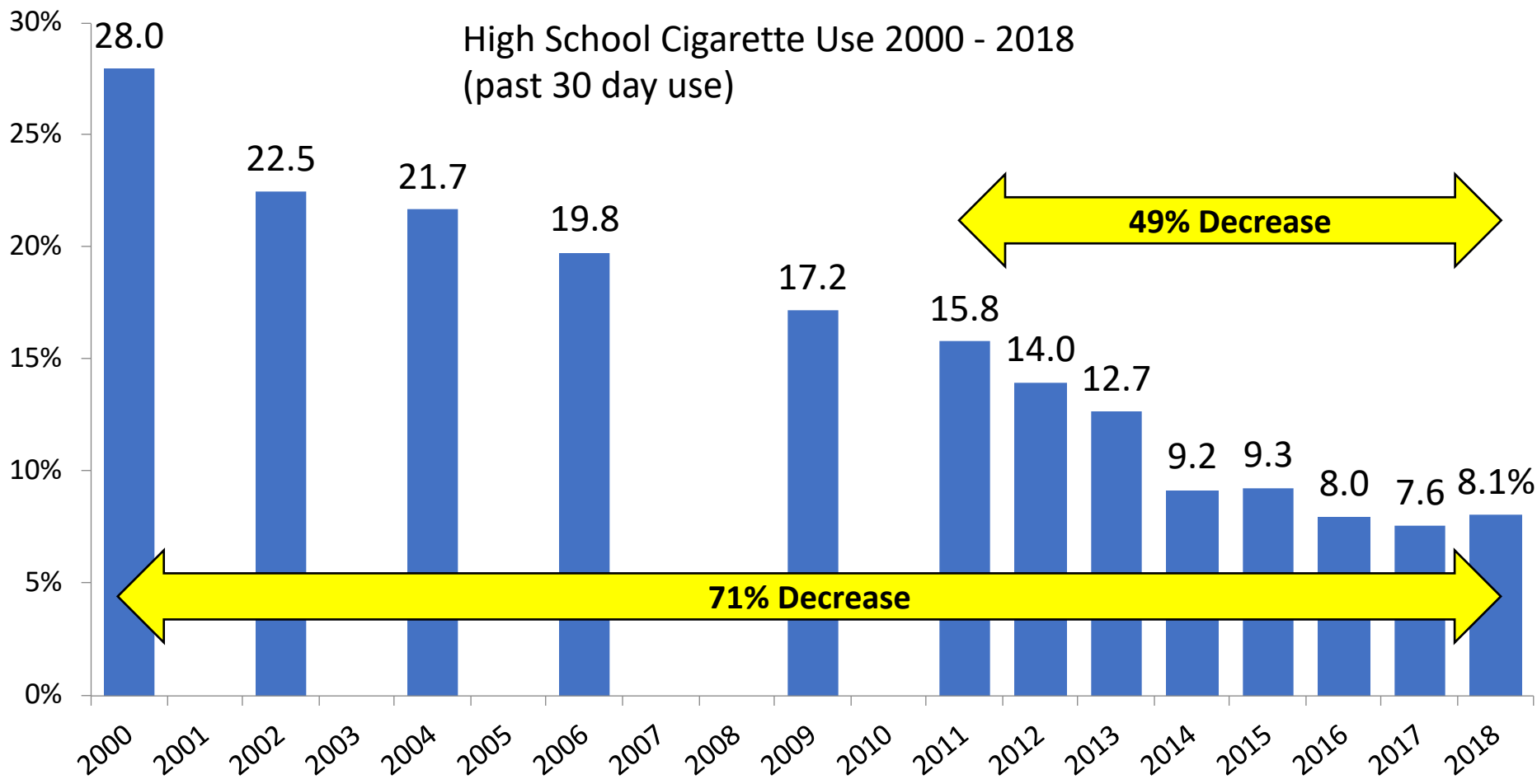
<http://kbgde.org/>



# Tobacco & Youth: Understanding current climate



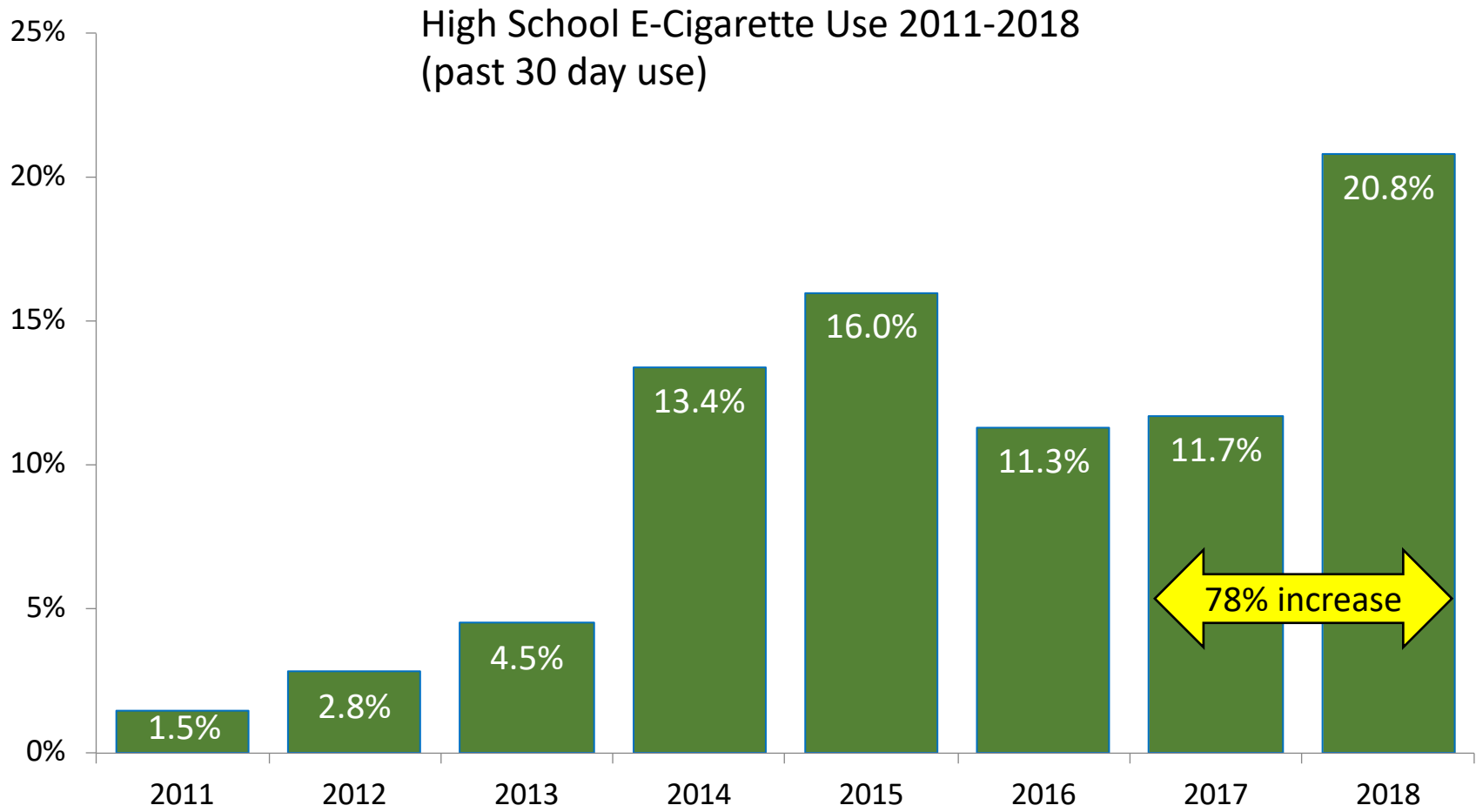
# We had been making significant progress on reducing youth smoking



Source: CDC, National Youth Tobacco Survey (NYTS)



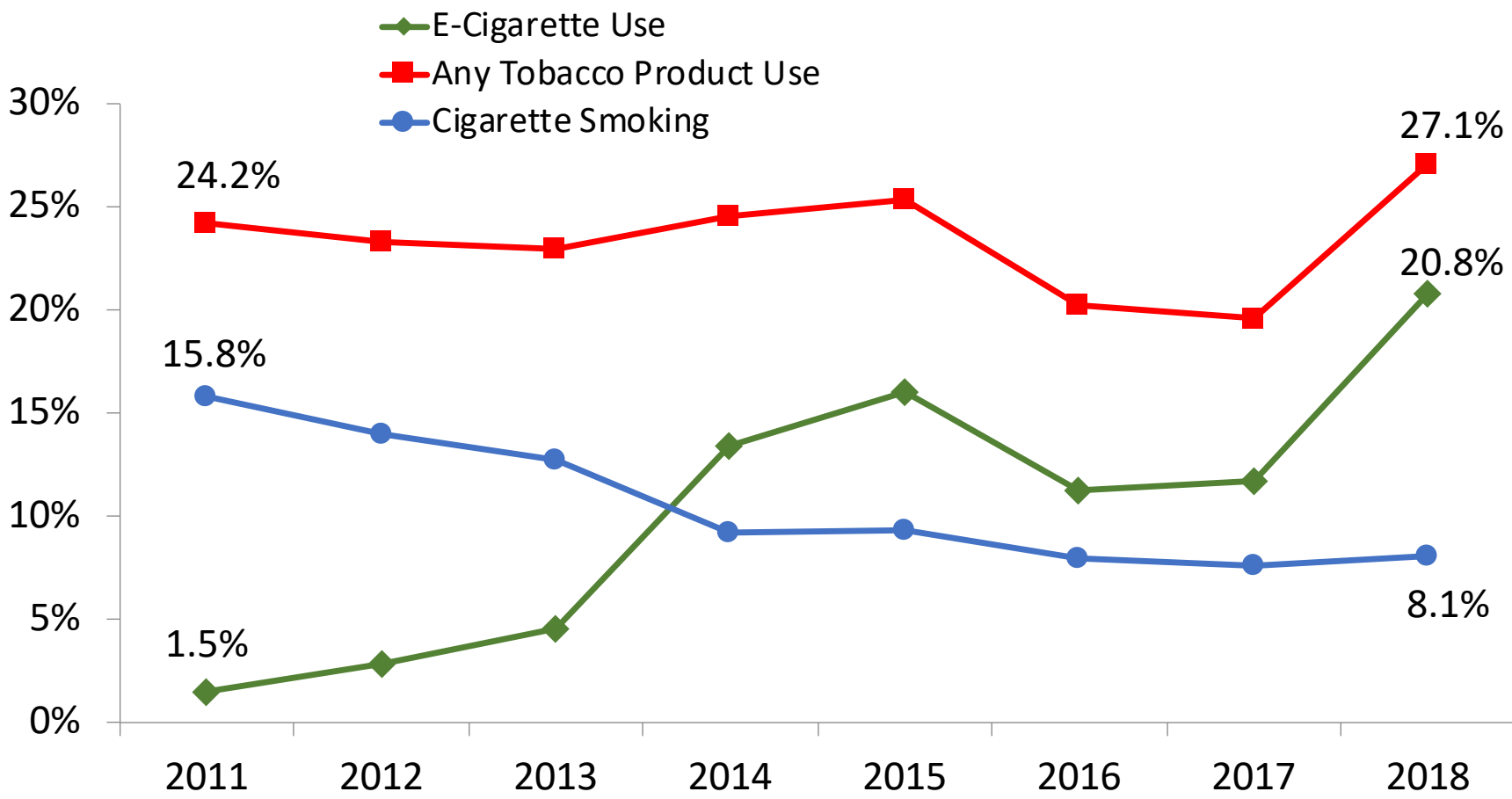
# But e-cigarettes are threatening that progress



Source: CDC, National Youth Tobacco Survey (NYTS)



# High School Any Tobacco Product & E-Cigarette Use 2011-2018



Source: CDC, National Youth Tobacco Survey (NYTS)



# Youth E-Cigarette Use Patterns of Use

- Over 3.6 million high school and middle school students currently use e-cigarettes
- E-cigarettes are the most popular tobacco product among youth, surpassing cigarettes for 5 years in a row
- 27.7 percent of high school e-cigarette users use the product frequently, on at least 20 of the preceding 30 days.

Source: CDC, National Youth Tobacco Survey (NYTS)



# Youth E-Cigarette Use & Other Tobacco Use

- Youth e-cigarette use is associated with initiation of combustible tobacco use [Source: U.S. Surgeon General and NASEM]
- From 2013 to 2016, youth (ages 12-15) e-cigarette use was associated with more than four times the odds of trying cigarettes and nearly three times the odds of current cigarette use. This translates to over 43,000 current youth cigarette smokers who might not have become smokers without e-cigarettes [Source: PATH]
- The increase in e-cigarette use has driven a 38 percent increase in use of any tobacco product among high school students (from 19.6 percent in 2017 to 27.1 percent in 2018). [Source: 2018 NYTS]





# Youth E-Cigarette Use & Other Tobacco Use

- E-cigarette availability is increasing overall youth tobacco use, including among low-risk youth
- E-cigarette use is associated with trying cigarettes even for low-risk youth

**Scott Gottlieb, M.D.** @SGottliebFDA [Follow](#)

Some **WRONGLY** presume that kids who use e-cigs might have instead used cigarettes. So they'll say, "well at least they're not smoking". **THIS IS NOT TRUE.** Data shows most kids using e-cigs wouldn't have smoked instead. But now, having initiated to nicotine, they're more likely to.

**U.S. FDA** @US\_FDA  
Many teens underestimate how easy it is to become addicted to nicotine. The younger teens start using tobacco the more likely they are to become addicted to nicotine. Keep your journey smoke-free. #RedRibbonWeek teen.smokefree.gov via @FDATobacco

7:08 AM - 25 Oct 2018



E-cigarette use among youth has skyrocketed in the past year at a rate of epidemic proportions.

U.S. Surgeon General Vice Adm. Jerome M. Adams  
December 2018

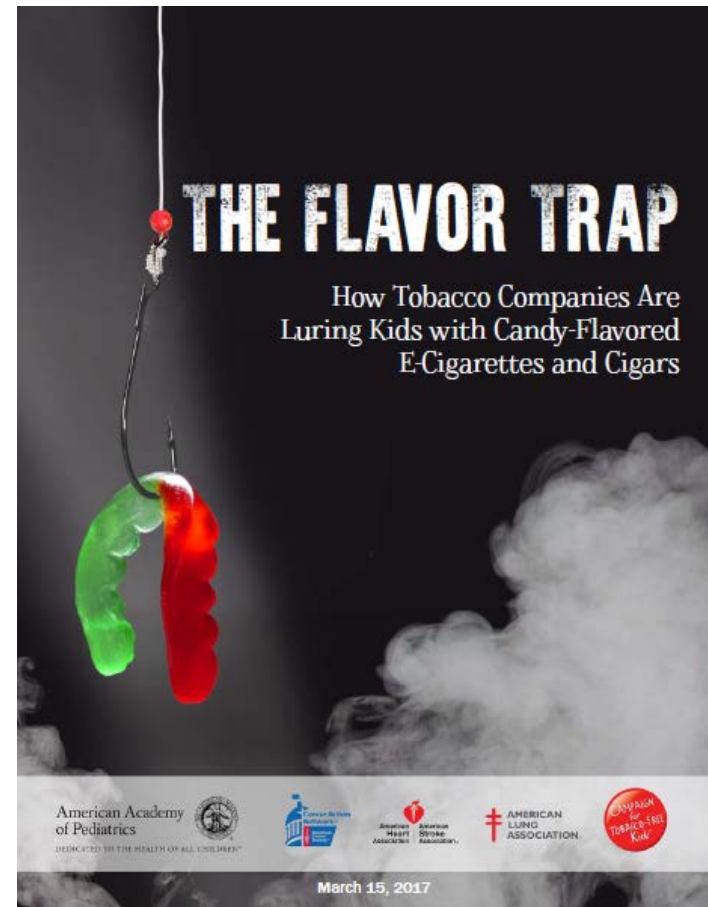
What I did not predict was that, in 2018, youth use of e-cigarettes and other ENDS products would become an epidemic.

FDA Commissioner Scott Gottlieb  
November 2018



# The Flavor Trap: How Tobacco Companies are Luring Kids with Candy-Flavored E-Cigarettes and Cigars

- Tobacco companies have a long history of developing and marketing flavored tobacco products as “starter” products that attract kids
- Growth in market share of sweet-flavored tobacco products, especially e-cigarettes and cigars
- Flavored products have fueled the popularity of e-cigarettes and cigars among youth



<https://www.tobaccofreekids.org/microsites/flavortrap/>

7 out of 10 current youth e-cigarette users said they used them “because they come in flavors I like.”







# Flavored E-Cigarettes are Popular Among Youth

- 97 percent of current youth (ages 12-17) e-cigarette users had used a flavored e-cigarette in the past month [Source: PATH 2016-2017]
- 70.3 percent of youth (ages 12-17) e-cigarette users say they use e-cigarettes “because they come in flavors I like” [Source: PATH 2016-2017]
- Use of menthol or mint flavored e-cigarettes among high school e-cigarette users also increased from 42.3 percent in 2017 to 51.2 percent in 2018 [Source: 2018 NYTS]



# Nicotine Salts

Nicotine salts “allow particularly high levels of nicotine to be inhaled more easily and with less irritation than the free-base nicotine that has traditionally been used in tobacco products, including e-cigarettes. This is of particular concern for young people, because it could make it easier for them to initiate the use of nicotine through these products and also could make it easier to progress to regular e-cigarette use and nicotine dependence.”

– Surgeon General’s Advisory on E-Cigarette Use Among Youth, 2018

**PODS CONTAIN OUR UNIQUELY SATISFYING JUUL E-LIQUID.**

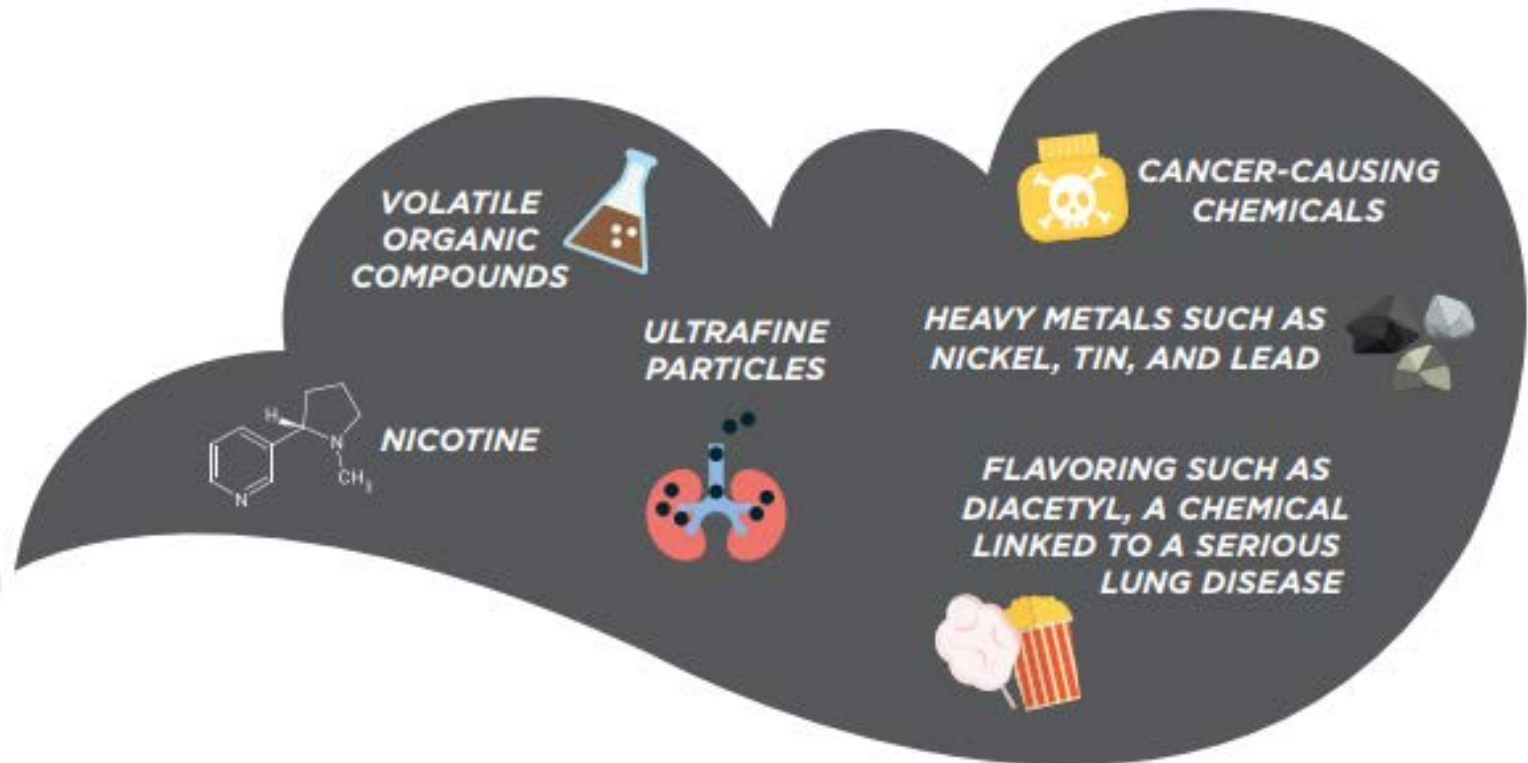
Our JUULsalts™ e-liquid contains a proprietary formulation that combines glycerol, propylene glycol, natural oils, extracts and flavor, nicotine and benzoic acid. Together with temperature-regulated vapor technology, this proprietary chemistry enables JUUL to deliver a vapor experience like no other.

Image captured from JUUL website, December 19, 2018, <https://www.juul.com/shop/pods/mango-5-percent>





# What is in E-Cigarette Aerosol?





## Why we're concerned

“Nicotine exposure during adolescence can cause addiction and can harm the developing adolescent brain.” [2016 SGR]

“E-cigarette aerosol is NOT harmless ‘water vapor.’” [CDC]

“There is substantial evidence that e-cigarette use increases risk of ever using combustible tobacco cigarettes among youth and young adults.” [2018 NASEM]





# JUUL: Sleek & Easy to Conceal

A 2018 study found that nearly one-fifth of youth (ages 12-17) surveyed reported having seen JUUL used in their school.



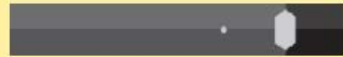
JUUL Device Charging in the USB port of a laptop



JUUL “skins” to personalize the device (not manufactured by JUUL Labs)

Source: Truth Initiative, “Nearly 1 in 5 youth say they have seen Juul used in school,” May 23, 2018, <https://truthinitiative.org/news/nearly-1-5-youth-say-they-have-seen-juul-used-school>.

AN INCREASINGLY POPULAR E-CIGARETTE DEVICE, CALLED JUUL,  
IS SHAPED LIKE A USB FLASH DRIVE.



Use of JUUL is sometimes  
called "JUULing."

JUUL's nicotine  
liquid refills are  
called "pods."  
JUUL is available  
in several  
flavors such as  
Cool Cucumber,  
Fruit Medley,  
Mango, and Mint.



All JUUL e-cigarettes have a high level  
of nicotine. According to the  
manufacturer, a single JUUL pod  
contains as much nicotine as a pack of  
20 regular cigarettes.



JUUL became available for sale in the United States in 2015. As of  
December 2017, JUUL is the top-selling e-cigarette brand in the United  
States.

News outlets and social media sites report widespread use of JUUL by  
students in schools, including in classrooms and bathrooms.



# JUUL Use Among Youth

- No official national prevalence data and existing e-cigarette prevalence data is not recent enough to capture JUUL's increase in market share
- A quarter of youth and young adult JUUL users don't refer to JUUL use as "e-cigarette use" or "vaping," but rather as "JUULing"
- 63% of youth and young adult JUUL users don't know that JUULpods always contain nicotine

Source: Willett, J, et al., "Recognition, use and perceptions of JUUL among youth and young adults," *Tobacco Control*, published online April 18, 2018



# JUUL Popularity Among Youth

The New York Times

The Washington Post

## 'I Can't Stop': Schools Struggle With Vaping Explosion



Liz Blackwell, a school nurse in Boulder, Colo., showed a collection of vape pens that had been confiscated from students during a presentation at Nevin Platt Middle School in March.  
Nick Cote for The New York Times

By Kate Zernike

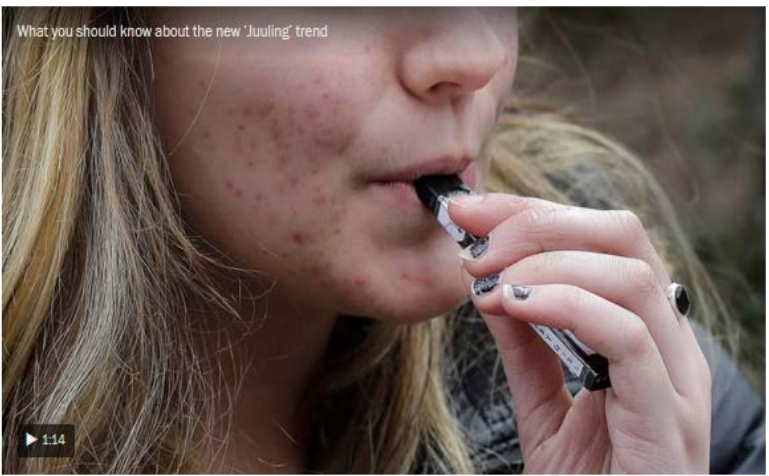
April 2, 2018



<https://www.nytimes.com/2018/04/02/health/vaping-cigarettes-addiction-teen.html>

Public Safety

## Juuling: If you don't know what it is, ask your kids



What you should know about the new 'Juuling' trend

E-cigarette use among teens, while illegal, isn't new. What's different about the Juul is the easy way it can be concealed from parents and teachers.  
(Victoria Walker/The Washington Post)

By Lynh Bui May 10 Email the author

At a high school in Maryland's capital city of Annapolis, the principal ordered doors removed from bathrooms to keep students from sneaking hits in the stalls.

A school system in New Jersey installed detectors in its high schools to digitally alert administrators to students looking for their next "rip."

[https://www.washingtonpost.com/local/public-safety/juuling-if-you-dont-know-what-it-is-ask-your-kids/2018/05/09/37e2f026-4d65-11e8-84a0-458a1aa9ac0a\\_story.html?utm\\_term=.58104e55fd64](https://www.washingtonpost.com/local/public-safety/juuling-if-you-dont-know-what-it-is-ask-your-kids/2018/05/09/37e2f026-4d65-11e8-84a0-458a1aa9ac0a_story.html?utm_term=.58104e55fd64)





# JUUL Popularity Among Youth



The New York Times

“It was love at first puff,” said Matt, now 19.

“The Juul was super, super sneaky and I loved it,” he said.

“Matt was open about wishing he didn’t do it. ... It was a constant battle for him.”

## *The Price of Cool: A Teenager, a Juul and Nicotine Addiction*

E-cigarettes may help tobacco smokers quit. But the alluring devices can swiftly induce a nicotine habit in teenagers who never smoked. This is the tale of one person’s struggle.



# JUUL is driving the youth e-cigarette epidemic



Teenagers Embrace JUUL, Saying It's Discreet Enough To Vape In Class



Schools seeing increase in JUUL use among middle, high students

*The New York Times*  
**'I Can't Stop': Schools Struggle With Vaping Explosion**



**Why 'juuling' has become a nightmare for school administrators**



'I go crazy if I don't have it': American teens are going wild over an addictive e-cigarette developed by Stanford graduates



JUUL warning: Area schools struggling to stay ahead of new vaping device



**JUUL e-cigarettes make their way into local schools**



Resource officers: JUULing a daily problem in area high schools



More teens sneaking vaping devices that look like flash drives, markers into suburban high schools



Juuling: If you don't know what it is, ask your kids



**The Juul Is Too Cool**



**'JUUL' e-cigarette that looks like USB stick being found at Palm Beach County schools**



THE PROMISE OF VAPING AND THE RISE OF JUUL



Teens Are 'Juuling' At School. Here's What That Means



Did Juul Lure Teenagers and Get 'Customers for Life'?

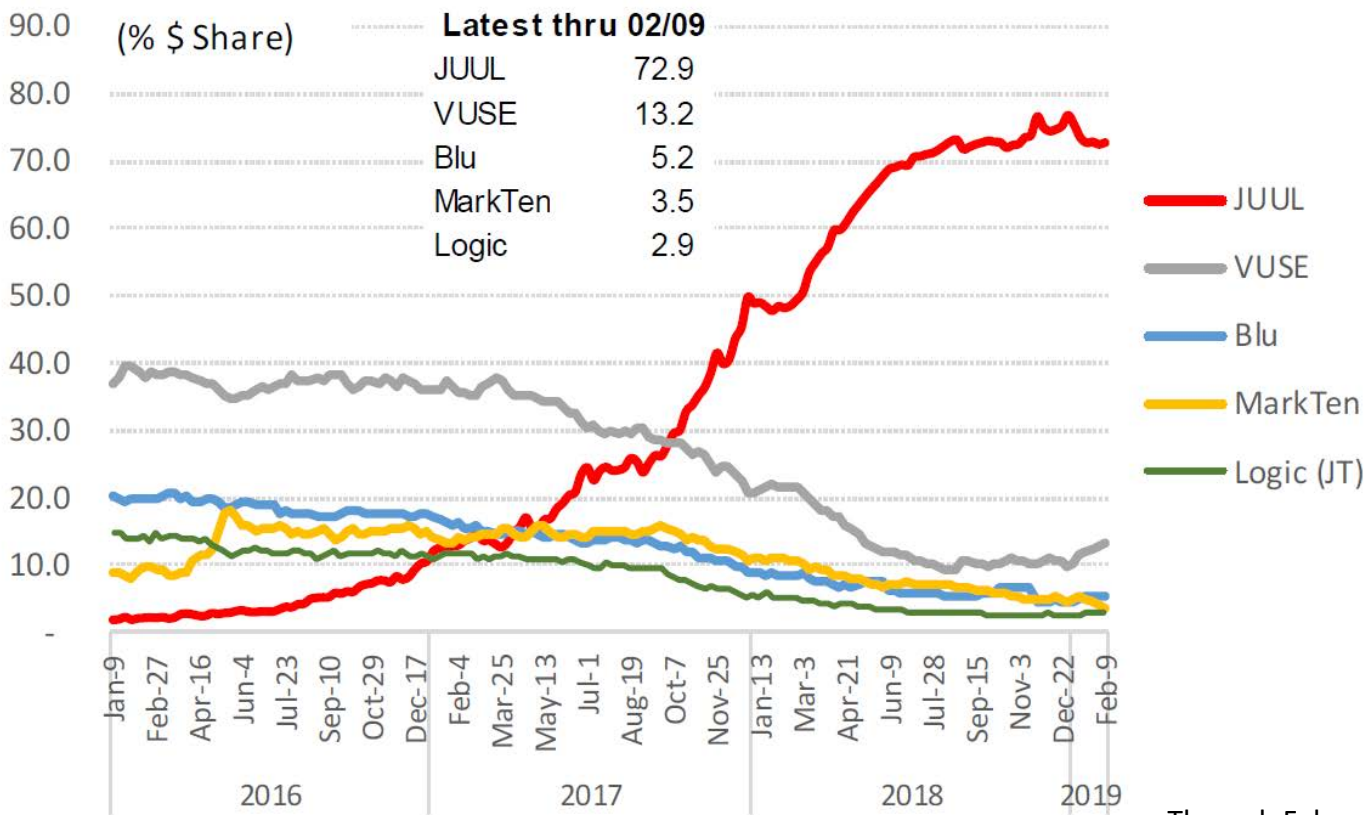


**Teens Love Vaping Flavors, and It's a Regulatory Nightmare**



# JUUL's share of the market has risen astronomically

## E-Cig \$ Share Trends Top 5 Players



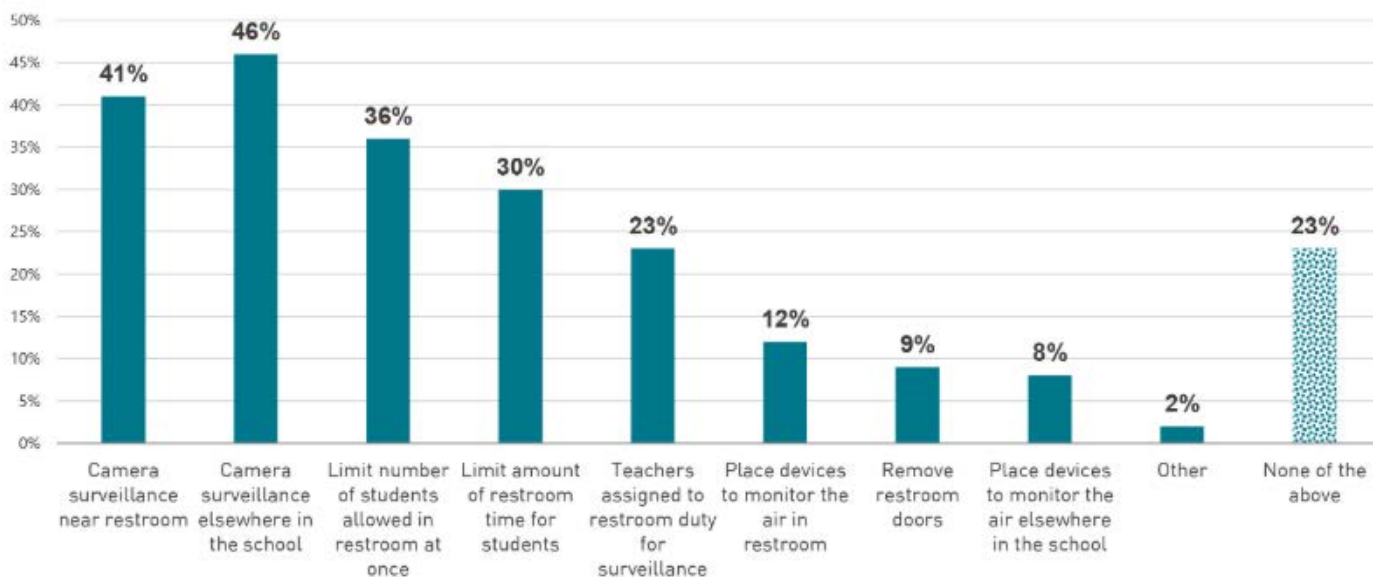
Through February 9, 2019

Source: Nielsen Total US xAOC/Convenience Database & Wells Fargo Securities, LLC



# how are schools responding to juul and the youth e-cigarette epidemic?

## What have schools done about e-cigarettes?







# How We Got Here: The Power of Design and Social Media Marketing



# A Perfect Storm

- Juul's delivery of high levels of nicotine to youth increases the risk of dependence and addiction
- The Rise in the use of Juul should not surprise anyone
  - Juul comes with a sleek high tech design, is easy to conceal and leaves no tell tale odor on a user's breath
  - It Directed its marketing to the Social media used by Adolescents
  - It Used Images that associate Juul with being cool, hip, having fun, freedom and sex appeal
- The Solution Requires FDA to Adopt Rules Governing the entire industry. Voluntary action will not work for E-Cigarettes any better than it has for Cigarettes.



# Claims of Innocence Undermined By A Deliberate Marketing Effort

## ***Juul Executives claim\****

- “We do not want underage kids using our products”
- “all of the things you see on social media, we have absolutely nothing to do with. We actively try to take these things down”

## ***The Facts could not be more different***

- Juul launched its product with a campaign using images that are virtually the same long used by the cigarettes industry
- Juul Paid for a social media campaign using Twitter, Instagram and YouTube using sponsored “ambassadors” supplemented by social media promoted by other Juul vendors

\* Sharfstein, J., “How Do You Solve a Problem Like Juul”, Milbank Quarterly, 2018, pp 2,3



# Vaping versus JUULing: how the extraordinary growth and marketing of JUUL transformed the US retail e-cigarette market

Jidong Huang,<sup>1</sup> Zongshuan Duan,<sup>1</sup> Julian Kwok,<sup>1</sup> Steven Binns,<sup>2</sup> Lisa E Vera,<sup>2,3</sup> Yoonsang Kim,<sup>2</sup> Glen Szczypka,<sup>2</sup> Sherry L Emery<sup>2</sup>

► Additional material is published online only. To view please visit the journal online (<http://dx.doi.org/10.1136/tobaccocontrol-2018-054382>).

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<sup>2</sup>Health Media Collaboratory, NORC at the University of Chicago, Chicago, Illinois, USA  
<sup>3</sup>VeraCite Inc, La Jolla, California, USA

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### ABSTRACT

**Background** While national surveys showed declines in e-cigarette use in the USA between 2015 and 2016, recent reports indicate that JUUL, a sleekly designed e-cigarette that looks like a USB drive, is increasingly being used by youth and young adults. However, the extent of JUUL's growth and its marketing strategy have not been systematically examined.

**Methods** A variety of data sources were used to examine JUUL retail sales in the USA and its marketing and promotion. Retail store scanner data were used to capture the retail sales of JUUL and other major e-cigarette brands for the period 2011–2017. A list of JUUL-related keywords was used to identify JUUL-related tweets on Twitter; to identify JUUL-related posts, hashtags and accounts on Instagram and to identify JUUL-related videos on YouTube.

**Results** In the short 3-year period 2015–2017, JUUL has transformed from a little-known brand with minimum sales into the largest retail e-cigarette brand in the USA, lifting sales of the entire e-cigarette category. Its US\$150 million retail sales in the last quarter of 2017 accounted for about 40% of e-cigarette retail market share. While marketing expenditures for JUUL were moderate, the sales growth of JUUL was accompanied by a variety of innovative, engaging and wide-reaching campaigns on Twitter, Instagram and YouTube, conducted by JUUL and its affiliated marketers.

**Conclusions** The discrepancies between e-cigarette sales data and the prevalence of e-cigarette use from surveys highlight the challenges in tracking and understanding the use of new and emerging tobacco products. In a rapidly changing media environment, where successful and influential marketing campaigns can be conducted on social media at little cost, marketing expenditures alone may not fully capture the influence, reach and engagement of tobacco marketing.

### INTRODUCTION

Use of electronic cigarettes has increased rapidly over the past decade in the USA, particularly among youth,<sup>1–2</sup> a development that raised significant public health concerns about the creation of a new generation of nicotine dependency.<sup>3–4</sup> E-cigarette devices that youth prefer have also evolved substantially over time: from early-generation cigalike e-cigarettes; to more advanced modifiable tank-style e-cigarettes<sup>5</sup>; to the recent emergence of a sophisticated, sleekly designed, discreet high-tech device called JUUL<sup>6</sup>—a flat, rectangular portable e-cigarette device fashioned to look like a computer flash

drive and rechargeable at a USB port.<sup>7</sup> A JUUL has two basic components: the device, which includes a battery and temperature regulation system, and the prefilled e-liquid cartridge, called a 'JUULpod' which also serves as the mouthpiece. JUUL is manufactured to be a closed system, that is, non-modifiable.<sup>6–8</sup> JUUL and its competitors, such as Storin e-cigarettes, are colloquially known as 'pod vaporizers' or 'vape pods.' JUUL is made by the San Francisco-based JUUL Labs,<sup>9</sup> which was founded in early 2017 by two former Stanford graduate students as a spinoff of the Pax Labs, manufacturers of the hybrid Pax brand vaporizers.<sup>8</sup>

Recent news is abuzz with the stories of JUUL's striking appeal to teens and the dramatic increase in JUUL use among the youth population since its mid-2015 market debut.<sup>9–14</sup> A 2017 survey reported that 8% of American youth and young adults (aged 15–24 years) used JUUL in the 30 days prior to the survey.<sup>15</sup> The reported popularity of JUUL among youth has prompted enforcement actions from FDA to stop youth use of, and access to, JUUL and other e-cigarettes.<sup>16</sup> The characteristics that purportedly make JUUL more popular among youth than its predecessors include its trendy design (called the 'Phone of e-cigarettes'<sup>17</sup>); youth-friendly flavours like Fruit Medley and Crème Brûlée; and JUUL's discreet profile—teens even report having vaped in class.<sup>18</sup> JUUL is reported to contain high levels of nicotine (0.7 mL or 59 mg/mL per pod) and uses a proprietary e-liquid formula (JUULsalts) based on the nicotine salts found in leaf-based tobacco rather than free-based nicotine.<sup>20</sup> Consequently, JUUL is said to deliver a nicotine peak in about 5 min, and can create an experience more like combustible cigarette smoking than found with other e-cigarettes on the market,<sup>21</sup> an attribute appealing to both young and adult smokers.<sup>7</sup>

Previous research demonstrated that the rapid growth in e-cigarette use was accompanied by a marked increase in advertising and promotion.<sup>22–24</sup> Similarly, several news articles have covered JUUL's marketing.<sup>7,25</sup> Concerns have been voiced regarding the youth of the men and women portrayed in JUUL's advertising in combination with the product design, which critics believe 'misleads about risk' of addiction.<sup>26</sup> JUUL is also highly discussed on social media platforms such as Twitter, Instagram, YouTube and Reddit.<sup>7, 27</sup> Because the audiences of these platforms disproportionately represent youth and young adults,<sup>28</sup> JUUL's marketing and promotion on social media

- JUUL spent at least \$1.6M on marketing its launch
- Strategy to supplement with social media
- Outside of “official” content, other JUUL related accounts even more popular
- Social media growth (tweets in particular) “highly correlated” with JUUL sales



# Creating a Buzz on Instagram



**JUUL** juulvapor • Following

juulvapor It's an Auto-Ship Gold Rush. Limited Edition Blush Gold is now available online while supplies last, exclusively for #JUUL Auto-Ship Subscribers. Click the link in our bio to learn more. .

WARNING: This product contains nicotine. Nicotine is an addictive chemical. #juulvapor

Load more comments

dancquach @phillyfreeze1 @dnovakowski @kay\_rey

pauldedo @juulvapor thank you!

mxkeyyh kids like u

advxcadxs @666whoami666 creme brule same thing

klake10 @xo\_\_lala

3,231 likes  
4 DAYS AGO

Add a comment...

April 4, 2018, <https://www.instagram.com/p/BhKfDqrg9Xz/?taken-by=juulvapor>



# Use of Twitter - Flavors

**JUUL** @JUULvapor · 28 Dec 2017

**JUUL** Visit the tropics this winter with mango #JUULpods. Shop: [bit.ly/2loR4oP](https://bit.ly/2loR4oP)

**mango**  
Experience a new kind  
of tropical getaway.

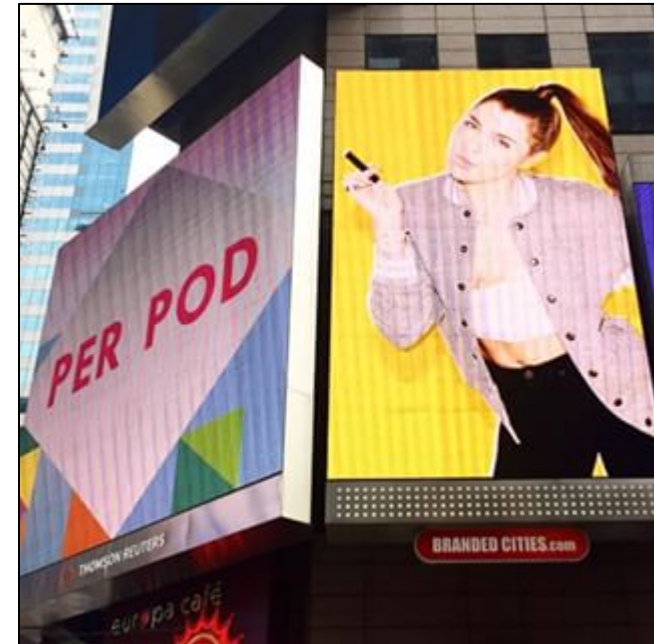
WARNING: This product contains nicotine. Nicotine is an addictive chemical.

🗨️ ↻ 6 ❤️ 17

JUUL Twitter post, 12/28/17, <https://twitter.com/JUULvapor/status/946451968637186048>



# Billboards



Times Square, New York City, <https://www.spencer-pederson.com/work-1/2017/2/23/juul-go-to-market>



# Magazine Advertising



Vice Magazine 2015, <http://cultideas.com/case-study/juul> and <http://gaia.adage.com/images/bin/image/jumbo/juulvicespreadFinalpage001.jpg>





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- Social media growth (tweets in particular) “highly correlated” with JUUL sales



# Use of Sponsored Content

SPONSORED

## Everything You Wanted to Know About Vaping But Were Afraid to Ask



StudioAtGawker for PAX Labs  
8/28/15 12:00pm • Filed to: JUUL

30.9K 4



August 28, 2015,

<https://studioatgizmodo.kinja.com/everything-you-wanted-to-know-about-vaping-but-were-afr-1723407016>

### What Makes the JUUL Different?

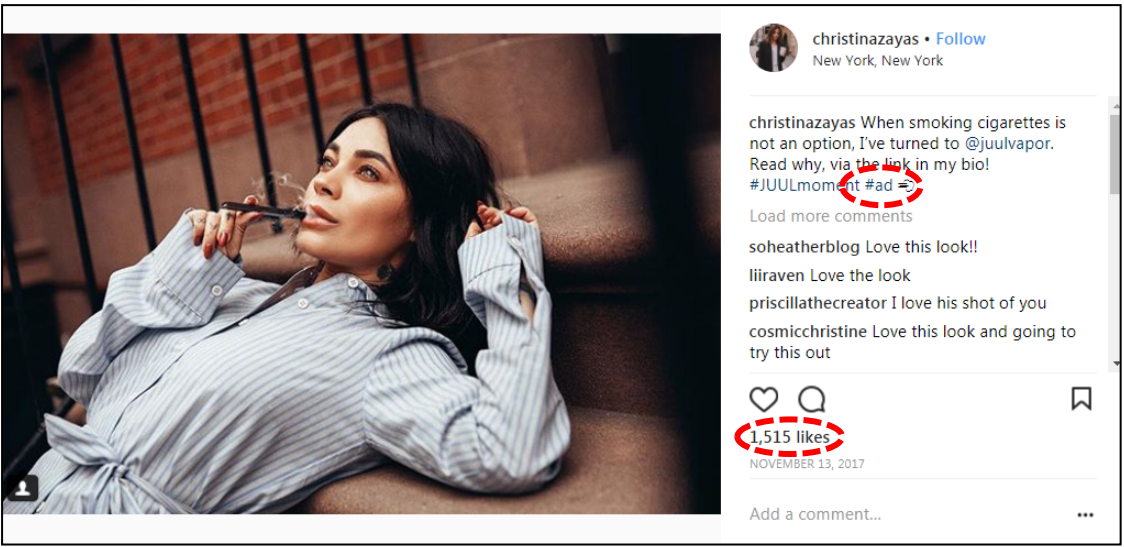
- It's super-easy. You pop in a cartridge of e-juice and start puffing. The juice comes in four flavors, with options for both traditionalists and more adventurous types.
- It looks cool. The JUUL has a sleek, modern-looking design that resembles neither a toy cigarette or a Victorian contraption. The designers (the same people who brought you PAX) actually took some time to make this thing look distinctive.
- The JUUL produces satisfying, consistent vapor. Plus, the device's proprietary firmware regulates temperature to ensure that it's always delivering just the right amount of power, which makes the flavor quality just as consistent.
- It actually feels like smoking. Just like tobacco cigarettes, the JUUL uses nicotine salts, rather than the freebase nicotine that most other e-cigarettes use. Because of the nicotine salts, the nicotine delivery is akin to a cigarette.

Ready to start vaping? [Get yourself a JUUL now.](#)

This post is a sponsored collaboration between [PAX Labs](#) and [Studio@Gawker](#).



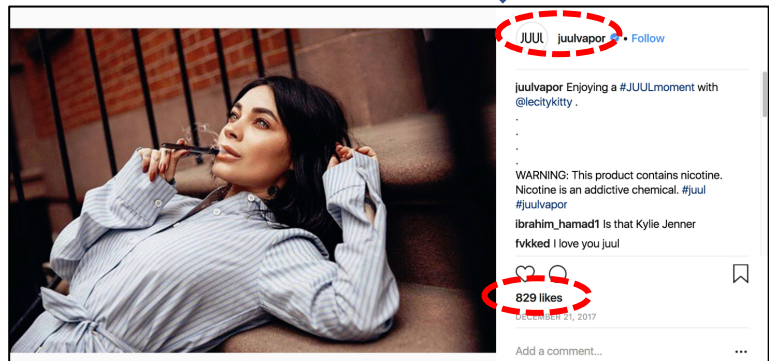
# JUUL: Paid Social Media Influencers



November 13, 2017,  
<https://www.instagram.com/p/BbcjDW3nMuO/?taken-by=christinazayas>

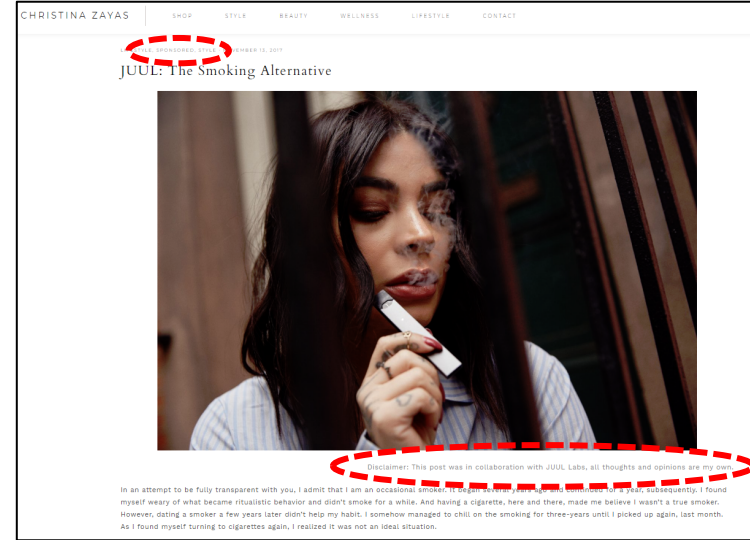
Christina Zayas has 57.9K Instagram followers as of November 15, 2018.

Cross-sharing with JUUL account



December 21, 2017, courtesy of Stanford Research into the Impact of Tobacco Advertising, [http://tobacco.stanford.edu/tobacco\\_web/images/pod/juul/instagram/large/ig\\_55.jpg](http://tobacco.stanford.edu/tobacco_web/images/pod/juul/instagram/large/ig_55.jpg)

JUUL also sponsored a post on Christina's blog



November 13, 2018, <http://christinazayas.com/juul-the-smoking-alternative/>





# Documented Characteristics of Instagram Posts by the Official JUUL Account

- Lifestyle Appeal (Freedom, Sex Appeal, Social Success)
- Fashion Images
- Flavor Images
- Product Images

Huang, J., Tobacco Control 2018





# Vaping versus JUULing: how the extraordinary growth and marketing of JUUL transformed the US retail e-cigarette market

Jidong Huang,<sup>1</sup> Zongshuan Duan,<sup>1</sup> Julian Kwok,<sup>1</sup> Steven Binns,<sup>2</sup> Lisa E Vera,<sup>2,3</sup> Yoonsang Kim,<sup>2</sup> Glen Szczypka,<sup>2</sup> Sherry L Emery<sup>2</sup>

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<sup>1</sup>School of Public Health, Georgia State University, Atlanta, Georgia, USA  
<sup>2</sup>Health Media Collaboratory, NORC at the University of Chicago, Chicago, Illinois, USA  
<sup>3</sup>VeraCite Inc, La Jolla, California, USA

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Received 20 March 2018  
Revised 7 May 2018  
Accepted 8 May 2018

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**Background** While national surveys showed declines in e-cigarette use in the USA between 2015 and 2016, recent reports indicate that JUUL, a sleekly designed e-cigarette that looks like a USB drive, is increasingly being used by youth and young adults. However, the extent of JUUL's growth and its marketing strategy have not been systematically examined.

**Methods** A variety of data sources were used to examine JUUL retail sales in the USA and its marketing and promotion. Retail store scanner data were used to capture the retail sales of JUUL and other major e-cigarette brands for the period 2011–2017. A list of JUUL-related keywords was used to identify JUUL-related tweets on Twitter; to identify JUUL-related posts, hashtags and accounts on Instagram and to identify JUUL-related videos on YouTube.

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- “official” Juul accounts supplemented by other JUUL vendors and related accounts
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Supplemental Table 1. JUUL-focused Accounts/Profile on Instagram (As of February 15<sup>th</sup>, 2018)

Account/Profile	# of Posts	# of Followers	# of Following	Note
Juulvapor	129	32,300	401	Official account of JUUL
Juulnation	632	81,000	7,492	Account belongs to EonSmoke, an online outlet <a href="https://www.eonsmoke.com/">https://www.eonsmoke.com/</a>
Juulcentral	1,192	58,000	6,827	Account belongs to EonSmoke, an online outlet
Juulwraps	53	10,500	0	Account belongs to JuulWraps, an online outlet. <a href="https://juulwraps.com/">https://juulwraps.com/</a> (Custom And Designer Skins For Juul)
Juul_university	333	14,100	879	Account belongs to EonSmoke, an online outlet
Doit4juul	1,850	81,800	6,882	Account belongs to EonSmoke, an online outlet
Juul.girls	41	472	132	Account belongs to UUL Skins, an online outlet <a href="https://www.uulskins.com/">https://www.uulskins.com/</a> (Premium Skins & Accessories for JUUL, Phix, & Rubi).
<b>Total</b>	<b>4,230</b>	<b>278,172</b>	<b>22,613</b>	





**juulcentral** Follow

juulcentral That's one way to hide it 😏

Load more comments

tuckeridge19 @miavaida that's so stealthy

grace.wolfman @tylerolenak

\_jocelynn\_r @olepalseth

olepalseth Such a good idea @\_jocelynn\_r

abby.bronicki @izzydunlap\_

asap\_ellis @richard\_audi3

blaisemcmahon It doesn't fit

ayyee.audreyyy DUDE @claudia.kersting

sav.828 @waylanmetcalf

alberto\_8062 @cam3ronmiller doing this

brycegram\_gram Bruhhhhh

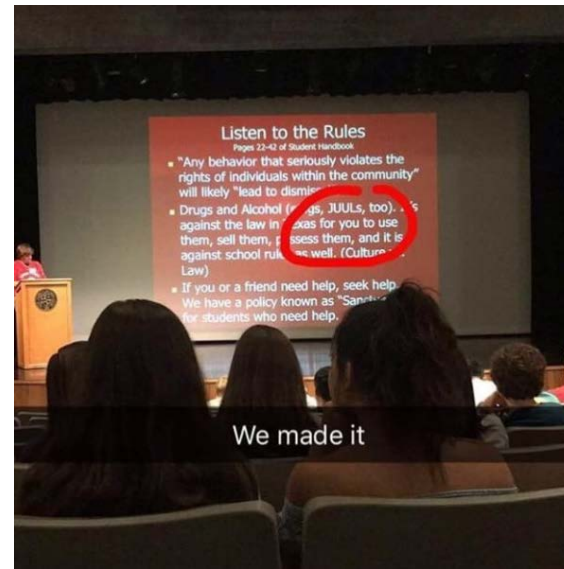
allofthenut @henryryan\_

4,527 likes

OCTOBER 18

Log in to like or comment.

<https://www.instagram.com/p/BaaUZ1OFbOI/>



**juulcentral** Follow

juulcentral all those nasty back to school rules 😏

BTW WE ARE DONATING TODAY AROUND 5 PM

Load more comments

jan\_jan @stawch

stephen.colodner @johnlockkk

aidan.gautier Ayyyy my friend got caught then he told the teacher he just killed this pod and they said what

da.backhouse @sophiasinclair @sarah.roo

ronnie.brns @aidangautier what? Killed this pod?

krispyspam 🙄🙄🙄

2,022 likes

AUGUST 30

Log in to like or comment.

[https://www.instagram.com/p/BYbB907I\\_VZ/?taken-by=juulcentral](https://www.instagram.com/p/BYbB907I_VZ/?taken-by=juulcentral)



**juulnation** Follow

juulnation Imagine taking 30 minutes out of your day to make this 😏

Load more comments

rosennr @perlick hahahahaha wtf

natcho\_cheese @matt\_gel25 omg

macbitchhhh wtf @jubzpubez

@hoeraay4

chriiss\_crl someone's gay

perlick @rosennr quit smoking the devils lettuce

amandii514wavi @babykatee

kevinr\_14\_ @carolinemorris03

carolinemorris03 @kevinr\_14\_sinner

lil.timmm @yung\_alxk

suckmycass @owen.m9

jackie\_schief @gracieandrews

11,882 likes

NOVEMBER 26

Log in to like or comment.

[https://www.instagram.com/p/Bb9\\_zcAAmsP/?taken-by=juulnation](https://www.instagram.com/p/Bb9_zcAAmsP/?taken-by=juulnation)

podcollege (1) doit4juul • Follow

Juulcentral juulnation and Di4j all shutdown

Over 250k followers altogether

I would suggest taking juul out of your name too

They are shutting down everything with juul in the title now

very sad

For sure

You should probably consider taking juul out of the @ tag

doit4juul !!THIS IS NOT A NORMAL POST!! Currently, most big pages with any titles with juul in them are getting shut down because pax (the juul company) sees these instagram pages NOT as a help to grow and endorse there product but a way to introduce harmful substances (nicotine) to underage users... I SUGGEST ANYBODY IN THE COMMUNITY TO CHANGE YOUR NAME SO "juul" ISNT IN IT! thank you - doit4juul

#doit4juul #juul #juulgang #doitforjuul #doitforstate #juulnation #juulcentral #juuling #juulvapor #juulpods #juulmemes #juultricks #juullife #juuls #jili #jilibox

hiozone gay ass niggas

enronfitness Y'all shook

63 likes

MAY 13

Log in to like or comment.



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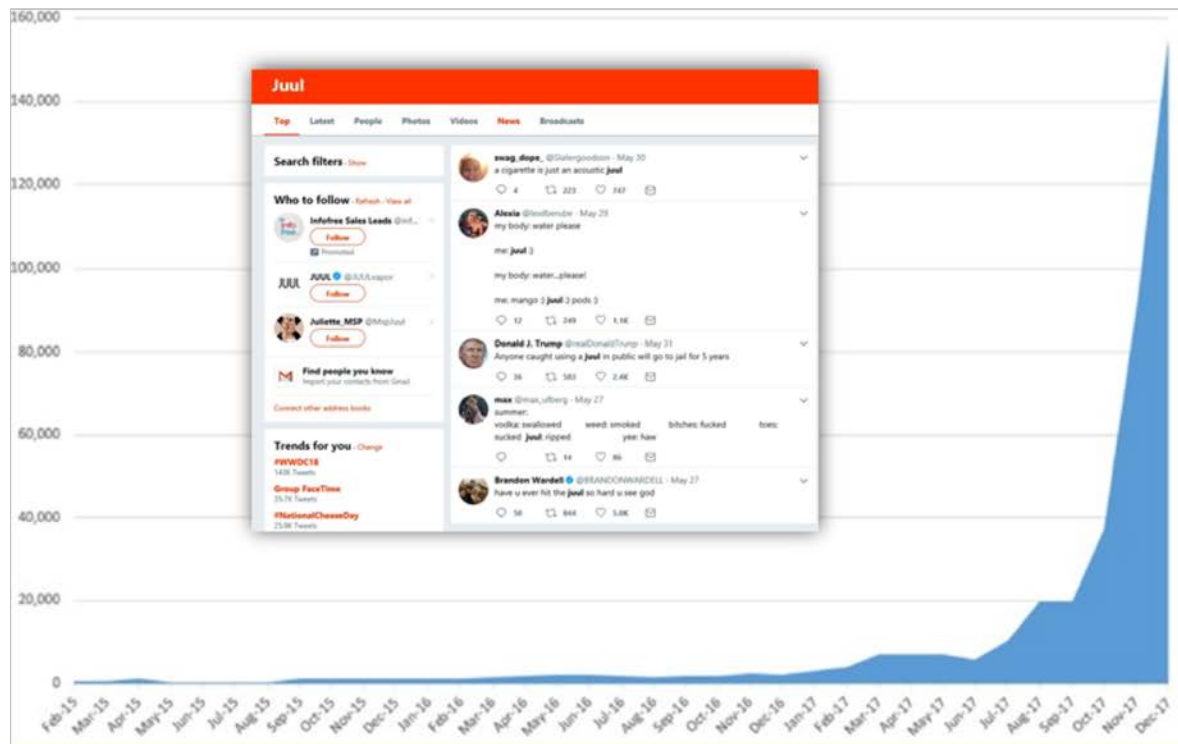
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# Number of JUUL-related Tweets on Twitter 2015- 2017



Source: Huang J, Duan Z, Kwok J, et al Vaping versus JUULing: how the extraordinary growth and marketing of JUUL transformed the US retail e-cigarette market Tobacco Control Published Online First: 31 May 2018. doi: 10.1136/tobaccocontrol-2018-054382

Slide credit: Brian King, CDC-OSH, "Prevalence and Trends in the Use of Alternative Tobacco Products," June 11, 2018





# You Can't Put the Genie Back Into The Bottle

**After FDA Challenged the Company,** Juul Labs said it will stop using models in social media to promote its product (June 14, 2018  
Bloomberg News)

- ***Too Little; Too Late:*** Having created the problem and denied their role in its creation, Juul's decision to stop its marketing campaign won't solve the problem or prevent it from happening again
- ***It Isn't Just Juul:*** Juul Copycats are already hitting the market. And Juul's demonstration of the power of social media as a marketing tool is guaranteed to be followed by others.

***The Juul Problem was Caused by One Company Acting Irresponsibly and then – like the cigarette companies – denying any responsibility for the problem;***

***It will only be Solved if FDA Takes Steps to Prevent Any Company from doing it again***



# JUUL and Social Media

June 14, 2018

JUUL changes social media policy

## JUUL Labs Implements New Social Media Policy for Instagram, Facebook and Twitter in Ongoing Effort to Combat Underage Use and Drive Awareness of Mission to Help Adult Smokers

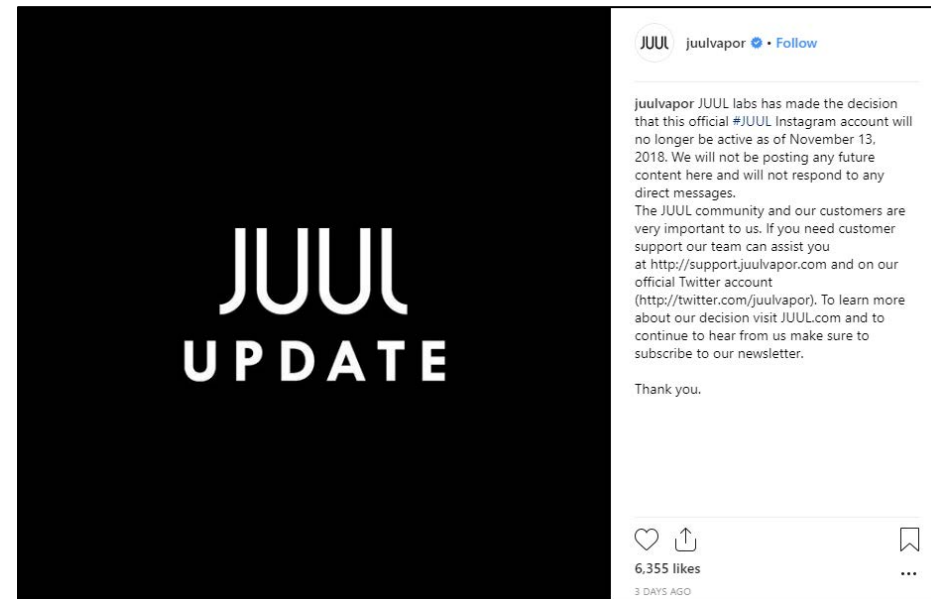
*Company Will No Longer Use Models on Social Media Platforms; Posts Will Focus on Testimonials from Adult Smokers Who Switched to JUUL*

*Company Has Partnered with Social Media Companies to Remove Posts, Pages, and Sales from Third-Parties Targeting Underage Accounts*

**SAN FRANCISCO** (June 14, 2018) – JUUL Labs today announced a new social media policy to strengthen its industry-leading marketing code. The Company, whose mission is to eliminate cigarettes by offering adult smokers a true alternative, will no longer feature models on Instagram, Twitter, or Facebook (JUUL Labs does not have a Snapchat account). Instead, JUUL Labs will feature former smokers who switched from combustible cigarettes to JUUL on its social media platforms.

November 13, 2018

JUUL suspends some social media accounts







# JUUL Copycats and New Products

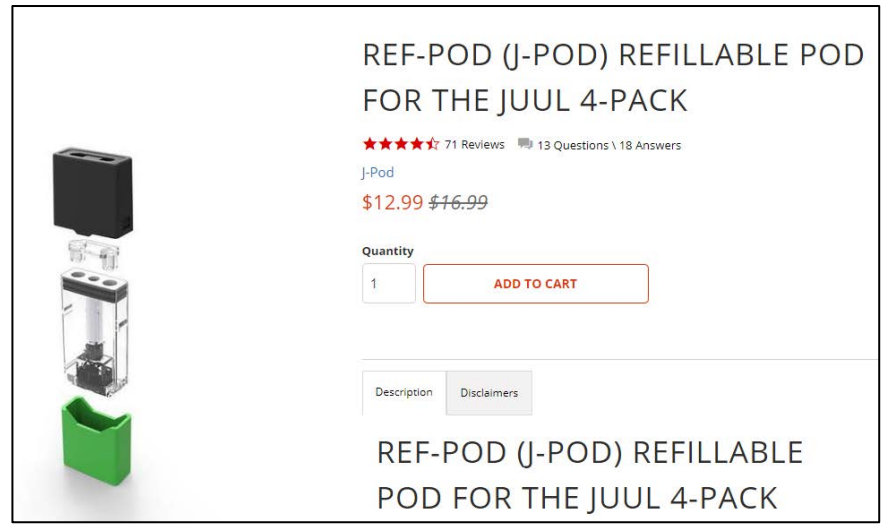




# JUUL Compatible Devices and Flavor Pods



October 5, 2018, [https://www.instagram.com/p/Boj\\_uY-njOC/](https://www.instagram.com/p/Boj_uY-njOC/)



<https://shopmvg.com/products/j-pod-refillable-pod-4-pack>





# Addressing The E-Cigarette Epidemic



# FDA and E-Cigarettes

- FDA's Final "Deeming Rule" issued May 5, 2016, effective August 8, 2016.
- What does the deeming rule cover?
  - Some minimum age requirements (in person only, not online)
  - Product registration and ingredient reporting
  - Warning label requirements (delayed until August 2018)
  - Product review applications (delayed until August 2022)
- What *doesn't* it cover?
  - Child-proof packaging
  - Flavors
  - Self-service
  - Marketing restrictions (similar to cigarettes): sponsorships, branded merchandise





# Surgeon General's Advisory, 2018

## Surgeon General's Advisory on E-cigarette Use Among Youth

*I, Surgeon General of the United States Public Health Service, VADM Jerome Adams, am emphasizing the importance of protecting our children from a lifetime of nicotine addiction and associated health risks by immediately addressing the epidemic of youth e-cigarette use. The recent surge in e-cigarette use among youth, which has been fueled by new types of e-cigarettes that have recently entered the market, is a cause for great concern. We must take action now to protect the health of our nation's young people.*

KNOW THE RISKS. TAKE ACTION. PROTECT OUR KIDS.

### The E-cigarette Epidemic Among Youth

Considerable progress has been made in reducing cigarette smoking among our nation's youth.<sup>1</sup> However, the tobacco product landscape continues to evolve to include a variety of tobacco products, including smoked, smokeless, and electronic products, such as e-cigarettes.<sup>2</sup> E-cigarettes are designed to deliver nicotine, flavorings, and other additives to the user via an inhaled aerosol.<sup>2</sup>

E-cigarettes entered the U.S. marketplace around 2007, and since 2014, they have been the most commonly used tobacco product among U.S. youth.<sup>2</sup> E-cigarette use among U.S. middle and high school students increased 900% during 2011-2015, before declining for the first time during 2015-2017.<sup>3</sup> However, current e-cigarette use increased 78% among high school students during the past year, from 11.7% in 2017 to 20.8% in 2018.<sup>4</sup> In 2018, more than 3.6 million U.S. youth, including 1 in 5 high school students and 1 in 20 middle school students, currently use e-cigarettes.<sup>4</sup>

E-cigarette aerosol is not harmless.<sup>2</sup> Most e-cigarettes contain nicotine – the addictive drug in regular cigarettes, cigars, and other tobacco products.<sup>2</sup> Nicotine exposure during adolescence can harm the developing brain – which continues to develop until about age 25.<sup>2</sup> Nicotine exposure during adolescence can impact learning, memory, and attention.<sup>1,2</sup> Using nicotine in adolescence can also increase risk for future addiction to other drugs.<sup>1,2</sup> In addition to nicotine, the aerosol that users inhale and exhale from e-cigarettes can potentially expose both themselves and bystanders to other harmful substances, including heavy metals, volatile organic compounds, and ultrafine particles that can be inhaled deeply into the lungs.<sup>2</sup>

Many e-cigarettes also come in kid-friendly flavors. In addition to making e-cigarettes more appealing to young people,<sup>5</sup> some of the chemicals used to make certain flavors may also have health risks.<sup>2</sup> E-cigarettes can also be used to deliver other drugs, including marijuana.<sup>2</sup> In 2016, one-third of U.S. middle and high school students who ever used e-cigarettes had used marijuana in e-cigarettes.<sup>6</sup>

For adults, e-cigarettes may have the potential to reduce risk for current smokers if they completely transition from cigarettes to e-cigarettes; however, a majority of adults who use e-cigarettes also smoke cigarettes.<sup>7</sup> For youth, the use of multiple tobacco products puts youth at even greater risk for addiction and tobacco-related harms.<sup>1,2</sup> Moreover, a 2018 National Academy of Sciences, Engineering, and Medicine report concluded that there was moderate evidence that e-cigarette use increases the frequency and intensity of cigarette smoking in the future.<sup>7</sup> But any e-cigarette use among young people is unsafe, even if they do not progress to future cigarette smoking.<sup>2</sup>

### E-cigarettes Come in Many Shapes and Sizes

E-cigarettes are a rapidly changing product class, and are known by many different names, including "e-cigs," "e-hookahs," "mods," and "vape pens."<sup>2</sup> Recently, a new type of e-cigarette has become increasingly popular among our nation's youth due to its minimal exhaled aerosol, reduced odor, and small size, making it easy to conceal.<sup>8</sup> Many of these new e-cigarettes look like a USB flash drive, among other shapes. One of the most commonly used

1

- Declared e-cigarette use by youth an “epidemic”
- Called for “aggressive steps to protect our children from these highly potent products that risk exposing a new generation of young people to nicotine.”
- Provides information for parents, teachers, health professionals to address problem
- Calls on states, communities, tribes, territories to implement evidence-based strategies including adding e-cigarettes to smoke-free air laws, licensing retailers, curbing e-cigarette marketing, reducing access to flavored tobacco products

<https://e-cigarettes.surgeongeneral.gov/>





# The FDA Law Doesn't Change Each State's Right To...

- Implement & enforce smoke-free laws
  - Expand to include e-cigarettes
- Apply tobacco taxes to e-cigarettes
- Take action to restrict the sale & distribution of e-cigarettes
  - Sales to youth (minimum age)
  - Flavors
  - Self-service displays/placement
- Pass licensing requirements



# Current State and Local Policies for E-Cigarettes

- **Smoke-free:** 15 states include e-cigarettes in their smoke-free laws (AK, CA, CT, DE, FL, HI, ME, MA, NJ, NY, ND, OR, RI, UT, and VT), 700+ localities
- **Tax:** 9 states (CA, DE, KS, LA, MN, NC, NJ, PA, WV), DC, and localities (4 in AK, Chicago, IL, Cook County, IL, and Montgomery County, MD)
- **Flavor restrictions:** 180+ localities



# Non-Policy Activities

- Prevalence surveys
  - Introduction of new products and resulting changes in tobacco use trends require improved, more detailed surveillance
- Monitor new product releases
- Monitor compliance with FDA regulations
- Monitor store marketing and promotions
  - Ads, pricing
- Watch for harm reduction proposals
- Share what you find!



# Resources



# Resources from the Office of the US Surgeon General

**KNOW THE RISKS**  
E-CIGARETTES & YOUNG PEOPLE

Health Care Professionals: Educate Your Young Patients About the Risks of E-cigarettes



Teenagers are more likely to get information on health issues from their parents and their *health care providers* than from peers, the internet, or social media. Findings from a 2015 Northwestern University study confirm that the internet is a supplement—not a replacement—for parents, teachers, and doctors as sources of credible health information.

### What Are E-cigarettes?

E-cigarettes are known by a variety of names, including vape pens, e-hookahs, mods, tank systems, and e-cigs. E-cigarettes are electronic devices that use a battery to aerosolize a liquid, usually containing nicotine, flavoring, and other additives, which is inhaled by the user through a mouthpiece. They can also be used to deliver marijuana and other substances. E-cigarette use among young people has increased over the last five years, and the use of these devices is now more common than the use of regular cigarettes among middle and high school students.

Many of your patients and their parents are unaware that nicotine is a common ingredient in e-cigarettes. Nicotine in any form, including from e-cigarettes, is unsafe for youth. Nicotine is highly addictive and can harm the developing adolescent brain.



**KNOW THE RISKS**  
E-CIGARETTES & YOUNG PEOPLE

get the facts   know the risks   take action   about   resources

## THE FACTS

on e-cigarette use among youth and young adults

Download Surgeon General Advisory

A Message from the Office of the U.S. Surgeon General

Listen to the Audio PSA

Audio PSA transcript

Share this page

<https://e-cigarettes.surgeongeneral.gov/default.htm>

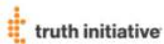




# Truth Initiative's E-Cigarette Quit Program

## First-of-Its-Kind e-Quit Program

- Supports e-cigarette quitters of all ages
  - Also a resource for parents to help their children quit
- Easy sign-up
  - Text **QUIT** to 202-804-9884.
  - Users can opt-in via BecomeAnEX or This is Quitting text message programs.



<http://www.thisisquitting.com/>  
<https://www.becomeanex.org/>



# FDA's Education Campaign – The Real Cost of Vaping

**THE REAL COST** [Warning Icon]

TOBACCO BASICS   EFFECTS   TAKING CONTROL   [Search Icon]

## KNOW THE REAL COST OF VAPING

**METAL PARTICLES FOUND IN VAPES:**

VAPES CAN CONTAIN CHEMICALS LIKE  
**ACROLEIN**

WHICH CAN CAUSE  
**IRREVERSIBLE LUNG DAMAGE**

SHARE [Icon]      SHARE [Icon]

<https://therealcost.betobaccofree.hhs.gov/>



# FDA-Scholastic Partnership – Resources for Teachers

## SCHOLASTIC PARTNERSHIP



- Collaborating with Scholastic to bring lesson plans, an infographic, and research to more than 700,000 teachers and administrators throughout the U.S.
- <http://www.scholastic.com/youthvapingrisks/>

**THE REAL COST OF VAPING**  
Understanding the dangers of teen e-cigarette use  
GRADES 5-12

**The latest data and information to help increase awareness about the dangers of youth vaping**

**DOWNLOAD LETTER**   **VIEW DATA**   **DOWNLOAD INFOGRAPHIC**

Center for Tobacco Products



Use this lesson and research activity to educate students on the health risks of vaping.

**The Facts About Vaping**

**DOWNLOAD LESSON**

**Getting the Facts Straight**

**DOWNLOAD ACTIVITY**

<http://www.scholastic.com/youthvapingrisks/>





# Resources from CDC

## Electronic Cigarettes

Get the facts about electronic cigarettes, their health effects and the risks of using e-cigarettes.

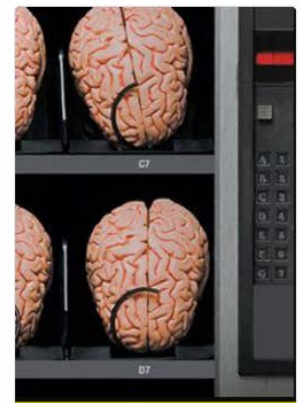
E-cigarettes are sometimes called "e-cigs," "vapes," "e-hookahs," "vape pens," and "electronic nicotine delivery systems (ENDS)." Some e-cigarettes look like regular cigarettes, cigars, or pipes. Some look like USB flash drives, pens, and other everyday items.



**About Electronic Cigarettes**  
Learn more about e-cigarettes and their effect on your health.



**E-Cigarettes and Young People**  
The use of e-cigarettes is unsafe for kids, teens, and young adults.



**It's not like you can buy a new brain.**  
Nicotine in e-cigarettes can harm brain development.  
Let's protect our kids.

**E-Cigarette Infographic**

**TEACHERS AND PARENTS:**  
That USB Stick Might Be an *E-cigarette*

Teachers and Parents: That USB Stick Might Be an E-cigarette

**E-Cigarette Fact Sheet**

**E-CIGARETTES SHAPED LIKE USB FLASH DRIVES:**

**INFORMATION FOR PARENTS, EDUCATORS, AND HEALTH CARE PROVIDERS**

E-cigarettes Shaped Like USB Flash Drives: Information for Parents, Educators and Health Care Providers.

[https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/index.htm](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/index.htm)



# Other Classroom Based Educational Program



YOUNG MINDS INSPIRED

## Lesson Plans

### Taking Down Tobacco

**Grades:** Middle School (6-8)

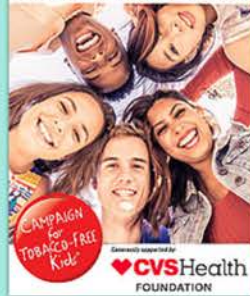
**Subject Area:** Health, Community Action

**Made Possible By:** Campaign for Tobacco-Free Kids and the CVS Health Foundation

Tobacco remains a serious threat for today's students. That's why the Campaign for Tobacco-Free Kids has created **Taking Down Tobacco**, an interactive youth training program designed to motivate your students to become part of the first tobacco-free generation. Add this innovative health education resource to your curriculum with these updated lesson plans designed to inform students about the health dangers of all tobacco products, including e-cigarettes, and the deceptions of tobacco marketing.

**Click the images below to download the program.**

### TAKING DOWN TOBACCO



### Send Us Your Feedback

Your opinion is important to our program sponsors, and to YMI. We depend on your input to continue providing free educational resources that make a real difference in the classroom.

<http://ymiclassroom.com/lesson-plans/takingdowntobacco/>



Visit Taking Down Tobacco



Complete Lesson Plans



Take-Home Letter





# Other Online Education Programs

Stanford Medicine  
Tobacco Prevention Toolkit: E-Cigarettes  
and Vape Pens

CATCH My Breath  
Youth E-cigarette Prevention Program

**Stanford MEDICINE** Tobacco Prevention Toolkit  
Modules for tobacco and nicotine education

Navigation: About, Everything Tobacco, E-Cigs/Vapes & Pod-Based, Hookah, Smokeless, Nicotine Addiction, Positive Youth Development, Resource Directory

**E-Cigarettes and Vape Pens**

Unit 1 - Where did E-Cigarettes and Vape Pens Come From?

Table of Contents	Overview
Unit 1 "Where Do E-Cigarettes & Vape Pens Come From?"	This module provides an understanding of the inner workings of e-cigarettes, the content of the aerosols they produce, and thirdhand smoke. It's broken down into 5 units, each of which explore e-cigarettes in-depth.
Unit 2 "So, What's Really in these E-Cigarettes & Vape Pens?"	<i>Please note: e-cigarettes, vape pens, etc. may be abbreviated as e-cigs or vapes, and refer to any device similar to an e-cigarette.</i>
Unit 3 "What's So Bad About E-Cigarettes & Vape Pens?"	<b>Goals</b> Increase knowledge about basic facts of e-cigarettes and the harm they cause
Unit 4 "Why Do E-Cigarettes & Vape Pens Matter to Young People?"	Gain awareness of strategies manufacturers and sellers of e-cigarettes employ to increase use among adolescents, such as deceptive and creative marketing strategies
Unit 5 "What Can I Do About E-Cigarettes & Vape Pens?"	Gain skills to refuse experimentation and use of e-cigarettes.

**CATCH MY BREATH**  
**YOUTH E-CIGARETTE & JUUL PREVENTION PROGRAM**

CATCH My Breath is a best-practices youth E-cigarette and JUUL prevention program developed by The University of Texas Health Science Center at Houston (UTHealth) School of Public Health. The program provides up-to-date information to teachers, parents, and health professionals to equip students with the knowledge and skills they need to make informed decisions about the use of E-cigarettes, including JUUL devices. CATCH My Breath utilizes a peer-led teaching approach and meets National and State Health Education Standards.

<b>AGES</b> 11-18 YEARS (GRADES 6-12) <i>Can be taught in one or multiple grade levels</i>	<b>DURATION</b> FOUR LESSONS 30-40 MINUTES EACH <i>4 lessons for each middle school grade (12 total) 4 lessons for high school</i>	<b>COST</b> FREE <i>Thanks to support from CVS Health</i>
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<https://med.stanford.edu/tobaccoprevention/toolkit/E-Cigs.html>

<https://catchinfo.org/modules/e-cigarettes/>



# Thank You

## Q&A