

# The Truth About Electronic Nicotine Delivery Devices

Presented by:

Tobacco Section, MI Department of Health and Human Services

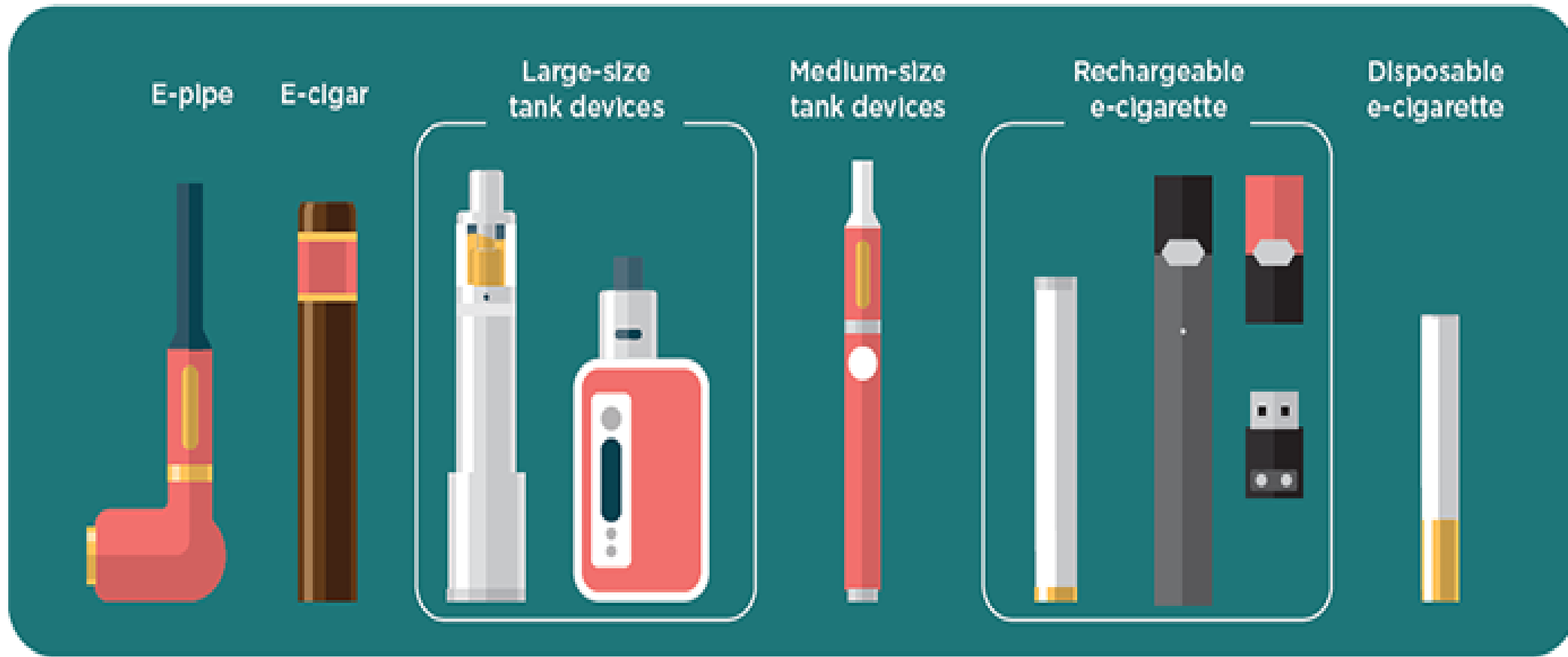
## WHAT IS AN E-CIG?



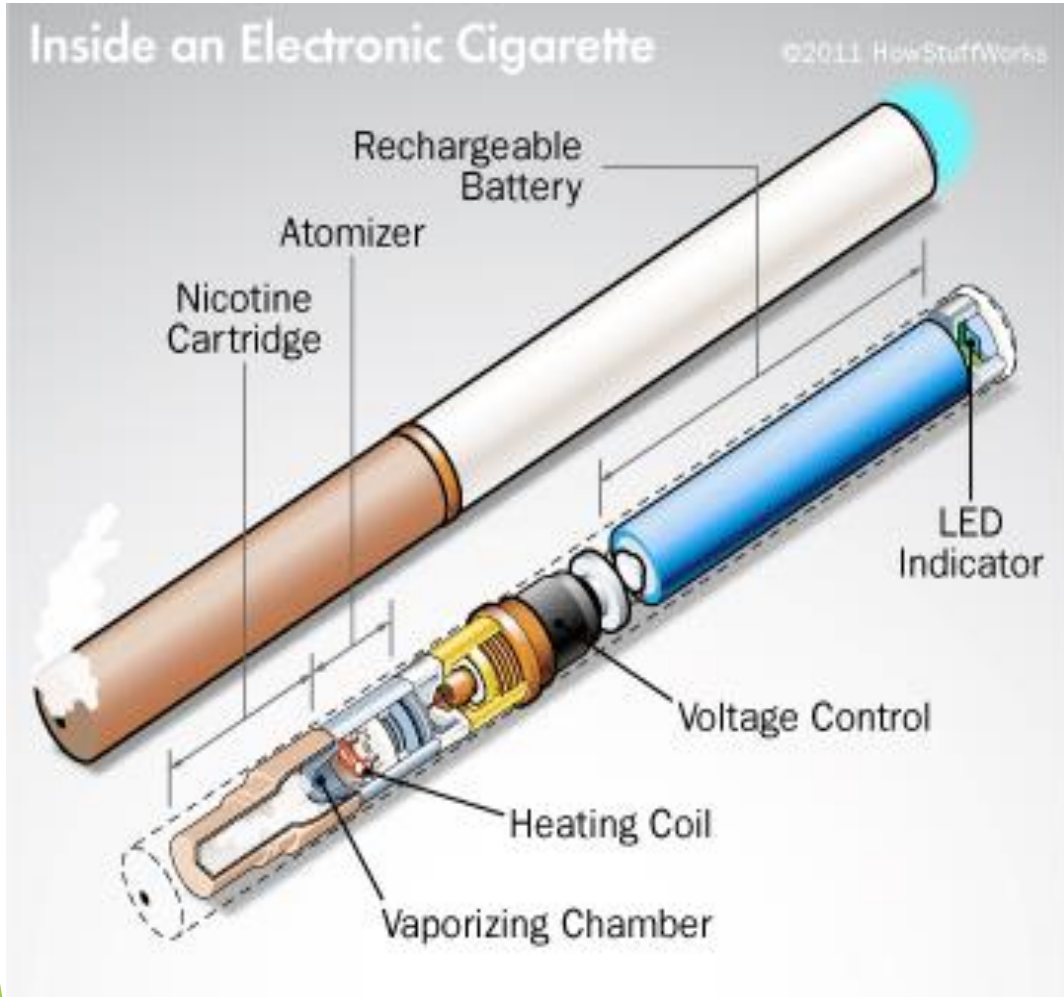
# Highlights of today's presentation

- ▶ Describe how electronic nicotine delivery devices operate and be able to visually identify them
- ▶ List 3-4 public health consequences, safety and health concerns of e-cigarettes
- ▶ Explain why youth are using these products
- ▶ Describe the “E-cigarette climate” in Michigan
- ▶ List 2-3 ENDS related resources

# Electronic nicotine delivery devices (ENDS)



# Electronic Cigarettes



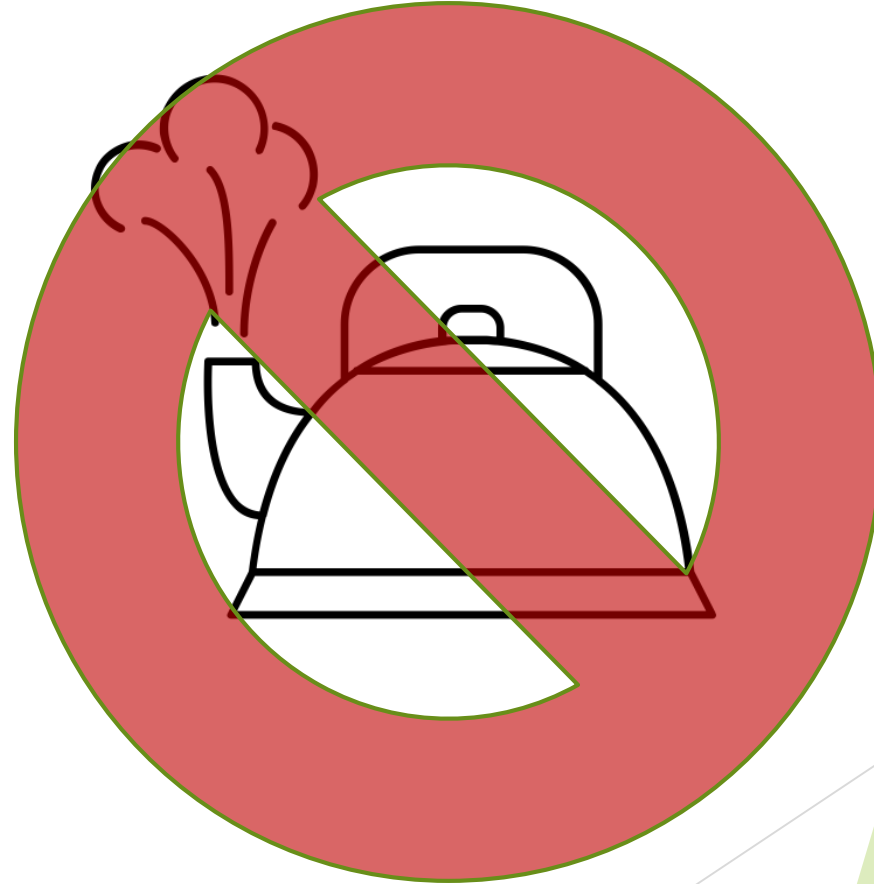
- Allows user to inhale aerosol containing nicotine and/or other substances.
- Disposable or rechargeable and/or refillable.
- Contain a cartridge filled with liquid nicotine, flavorings and glycerin or propylene glycol.
- When coil heats, it converts the contents of the cartridge into aerosol.

# ENDS products can be used for more than e-juice...

- One-third of US middle and high school students reported using e-cigarettes with non-nicotine substances.
- 1 in 3 youth have used marijuana with the JUUL device.
- Hash oils can reach 95% pure THC, the psychoactive component in marijuana. High concentrations could cause side effects like temporary psychosis.

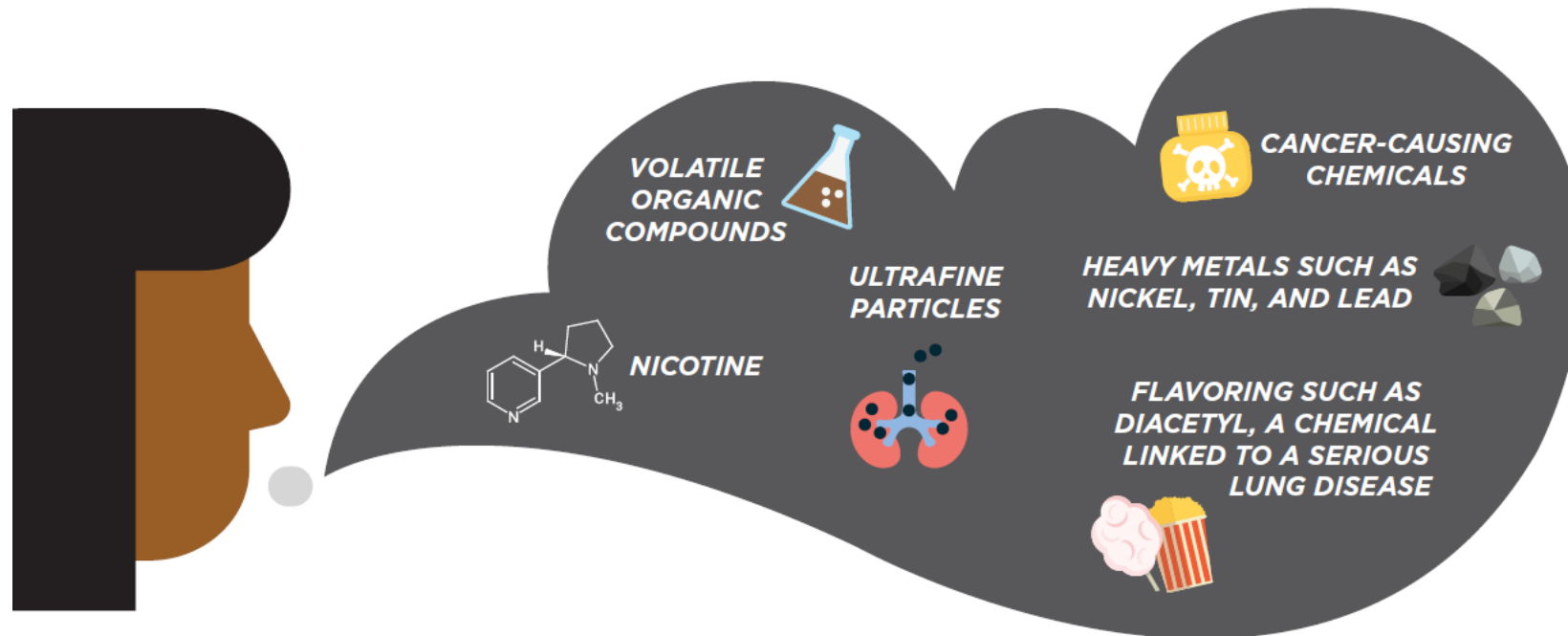


# It's an Aerosol, Not a Vapor



## WHAT IS IN E-CIGARETTE AEROSOL?

THE E-CIGARETTE AEROSOL THAT USERS BREATHE FROM THE DEVICE AND EXHALE CAN CONTAIN HARMFUL AND POTENTIALLY HARMFUL SUBSTANCES:



It is difficult for consumers to know what e-cigarette products contain. For example, some e-cigarettes marketed as containing zero percent nicotine have been found to contain nicotine.



Nickel



Phenol



Benzene



Formaldehyde

Toluene



Isoprene

Propylene Glycol



Acetone



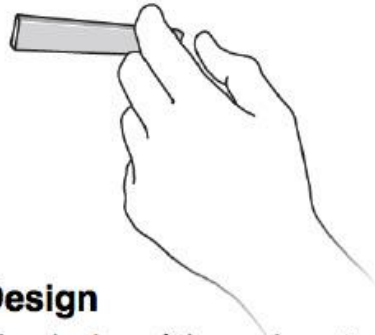
Cadmium





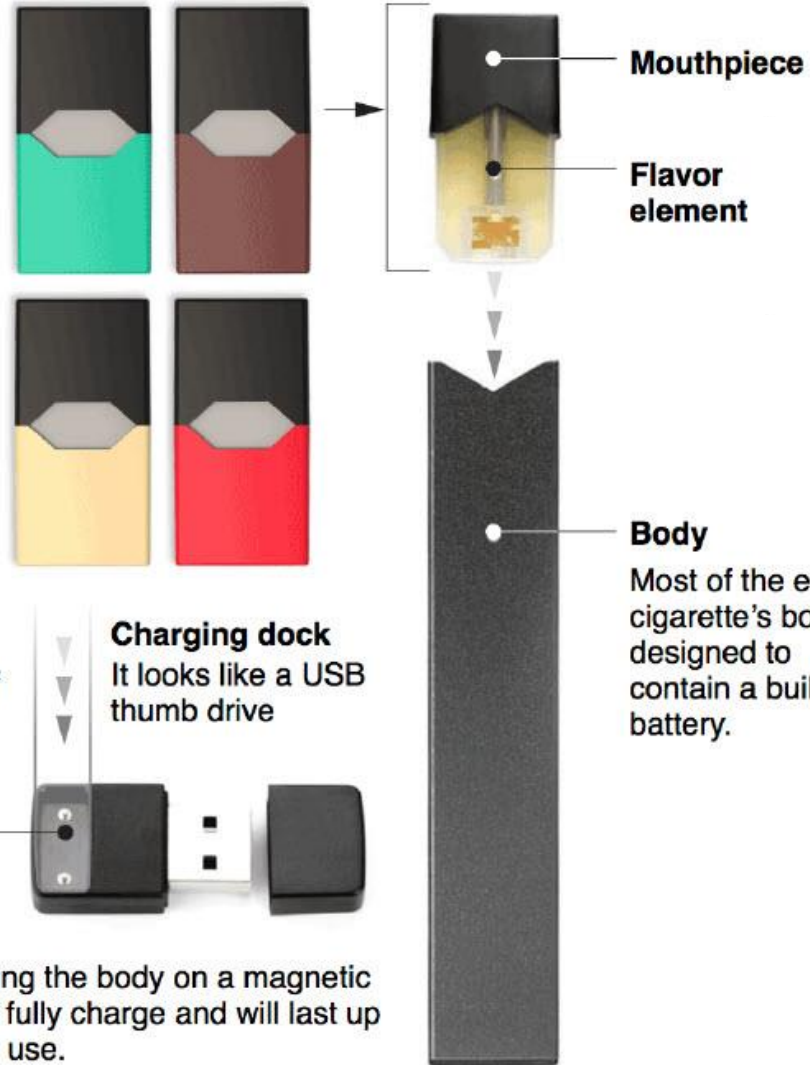
## JUUL flavor pods

The juice-flavored pods contain 50 milligrams of nicotine, roughly equivalent to a pack of cigarettes.



## Design

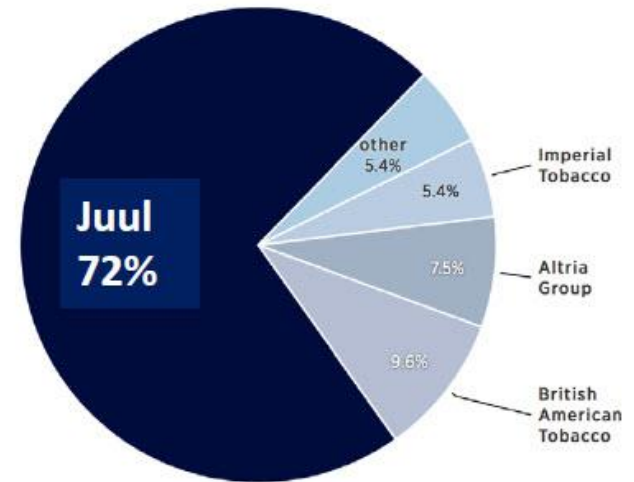
The design of the e-cigarette is about the same size as a cigarette and weighs a couple of grams.



# JUUL

## Juul dominates the U.S. e-cigarette market

Juul Labs represented 72.2 percent of dollar market share in the four-week period ended Aug. 11 2018, according to Nielsen data.



Source: [Wells Fargo](#)

CNBC

SOURCE: [juulvapor.com](#)

JAMES ABUNDIS / GLOBE STAFF

# “Recognition, use and perceptions of JUUL among youth and young adults”

- Nearly 1-in-5 youth have seen JUUL used at their school.
- Youth reported relative ease obtaining JUUL devices.
- Most were not aware that JUUL pods always contain nicotine.
- Nearly half of those who are aware of JUUL believe it is “a lot” or “a little” LESS harmful than cigarettes.



Suorin Drop



Khree UFO



Suorin Air



SMOK Rolo Badge

# Dripping



# PUFFiT

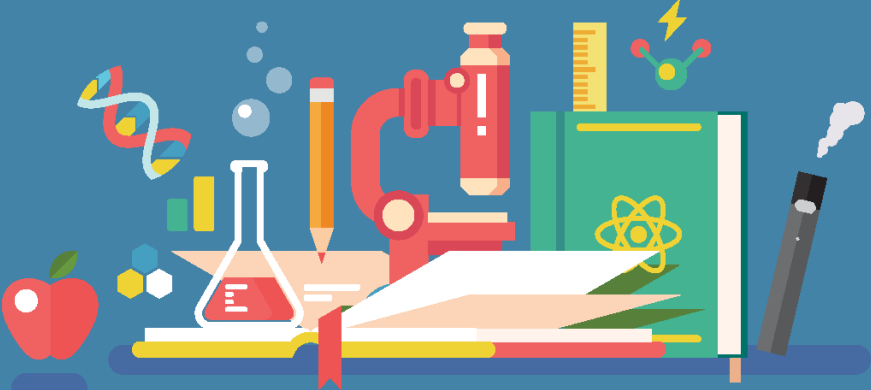


# Zig Zag 335

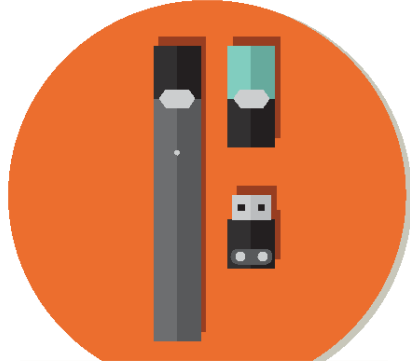


# IQOS - I Quit Ordinary Smoking HEAT-NOT-BURN CIGARETTES





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



An increasingly popular e-cigarette, called JUUL, is shaped like a USB flash drive.



JUUL delivers a high dose of nicotine. Nicotine is highly addictive and can harm adolescent brain development.



E-cigarettes are the most commonly used tobacco product among U.S. middle and high school students.



Some e-cigarettes don't look like tobacco products, so some kids use



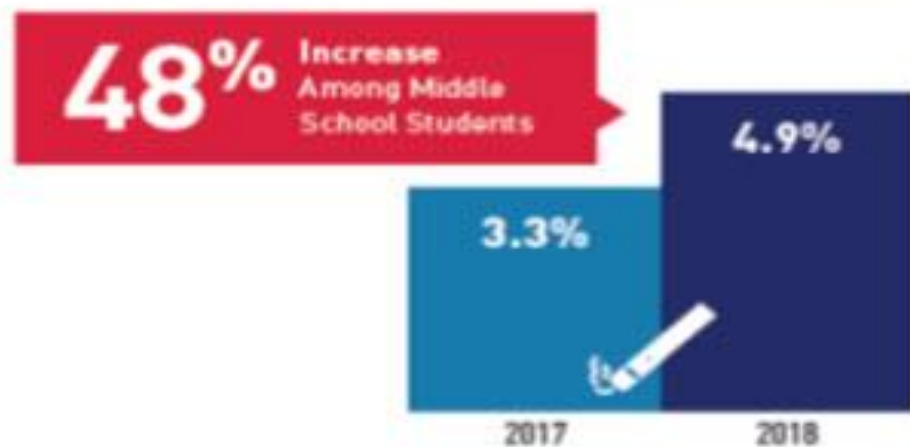
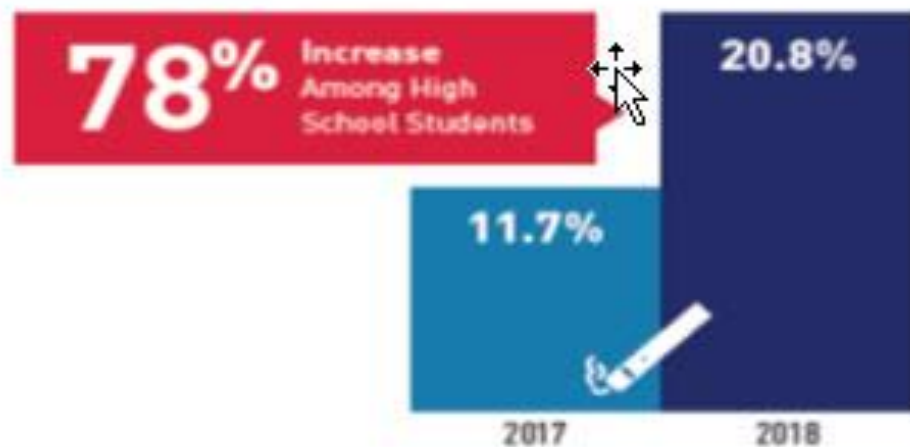
**TOBACCO PRODUCT USE IN ANY FORM, INCLUDING E-CIGARETTES, IS UNSAFE FOR YOUTH.**

# 2018 NATIONAL YOUTH TOBACCO SURVEY FINDS CAUSE FOR CONCERN

Current e-cigarette use among middle and high school students increased alarmingly between 2017 and 2018.

Here is a breakdown of the recent findings:

**SURGE IN YOUTH CURRENT E-CIGARETTE USE — 1.5 Million More Students Used E-Cigarettes in 2018 vs 2017**





## YOUTH E-CIGARETTE USE IS RISING

### E-CIGARETTES TYPICALLY DELIVER NICOTINE

YOUTH NICOTINE EXPOSURE CAN:



- CAUSE ADDICTION
- HARM THE DEVELOPING BRAIN

### E-CIGARETTE USE SURGED DURING 2017-2018

IN 2018:



**1 IN 5** HIGH SCHOOL KIDS  
**1 IN 20** MIDDLE SCHOOL KIDS  
**CURRENTLY USE  
E-CIGARETTES**

### HELP PREVENT YOUTH E-CIGARETTE USE

- **KNOW** THE RISKS OF E-CIGARETTES
- **TALK** TO YOUTH ABOUT THESE DANGERS
- **BE** TOBACCO FREE





# BOOM BOOM POP



VAPORTRIM

## MILK CHOCOLATE

Inhale Flavor  
Curb Cravings  
Lose Weight

MILK CHOCOLATE

~ 0 Calories ~

0 Calories | 50 Servings

# LOVELY BUBBLY

### #1 Flavor Selection with 19 Flavors!



## Crave

COULTEUR E-CIGARETTES

ecidlife

VAPORTRIM

Inhale Flavor  
Curb Cravings  
Lose Weight

Apple Pie

~ 0 Calories ~

VAPORTRIM

Inhale Flavor  
Curb Cravings  
Lose Weight

Blueberry Muffin

~ 0 Calories ~

VAPORTRIM

Inhale Flavor  
Curb Cravings  
Lose Weight

Caramel Fudge

~ 0 Calories ~

VAPORTRIM

Inhale Flavor  
Curb Cravings  
Lose Weight

Chocolate Strawberry

~ 0 Calories ~

VAPORTRIM

Inhale Flavor  
Curb Cravings  
Lose Weight

MILK CHOCOLATE

~ 0 Calories ~

### What's Your Taste?

Choose E-cigarette Cartridge From 7 Delicious Flavors by XEO E-cigarettes !!

World's Most Powerful E-cigarette Available in 7 Flavors!!

Tastes your Mouth Crave For, Which Flavor you Smoke?

XEO

# “Trendy” Products



**Percentage of high school students who used an electronic vapor product during the past 30 days  
in 18 Counties in Michigan- MiPHY 2015-16 compared to 2017-18**

	County	2015-2016	2017-2018	Rate of increase
1	Allegan	16.8	25.9	54%
2	Muskegon	17.5	24.9	42%
3	Berrien	19	24.5	29%
4	Ingham	11.5	20.3	77%
5	Jackson	16.7	23.8	43%
6	Branch	14.4	30.2	109%
7	Genesee	18.8	24.4	30%
8	St. Clair	20.6	31.9	55%
9	Wayne	15.1	24.2	60%
10	Macomb	14.8	29	96%
11	Oakland	16	28.4	78%
12	Manistee	16.2	31.1	92%
13	Chip/Luce/Mackinac	15.3	20.7	35%
14	Charlevoix	17.3	35.2	103%
15	Livingston	21.6	28	30%
16	Saginaw	14.4	19.9	38%
17	Kent	15.4	22.2	44%
18	Huron	18.3	30.9	69%

# FDA proposes a step to curb youth use of flavored ENDS products, but it's not enough...

- ▶ November 15, 2018: the FDA proposes to restrict the sale of some flavored ENDS in stores - EXCEPT MINT AND MENTHOL (and tobacco) flavors - and with heightened age verification for online sales
- ▶ New data shows that **51%** of high school e-cigarette users use mint or menthol products
- ▶ An effective strategy would be to ban ALL FLAVORED PRODUCTS



# What are E-cigarettes NOT?

- ▶ E-cigarettes are NOT an approved U.S. Food and Drug Administration (FDA) quit tobacco device and should NOT be marketed as such.

The New Safe Cig  
MICRO



**WHY QUIT?**  
**SWITCH TO BLU**

- ▶ Have the Freedom to Smoke Anywhere
- ▶ No Tobacco, No Ash, No Smell
- ▶ All Flavors Made in the U.S.A.



# Common myths

believed about vaping, along with the facts.

“It’s just flavoring.”

Vapes get their flavors from chemicals. While these flavorings are safe to eat in food, they’re not safe to inhale. Inhaling flavor chemicals can harm your lungs.<sup>11</sup>

Want an example?

Some buttery-flavored vapes like caramel contain diacetyl and acetoin. Inhaling diacetyl has been linked to popcorn lung, a lung disease that doesn’t have a cure.<sup>11</sup>

“It’s just water vapor.”

But it’s not.

Vaping can expose the user’s lungs to harmful chemicals like formaldehyde, diacetyl and acrolein, as well as toxic metal particles like nickel, tin and lead.<sup>4,8-10,11-13</sup>

“I don’t have an addictive personality —I won’t get hooked on vapes.”

Some vapes that claim they are nicotine-free are not.<sup>8,17-22</sup>

“My vape says it’s nicotine-free. There’s no way I’ll become addicted.”

Vaping delivers nicotine to the brain in as little as 10 seconds.<sup>14,15</sup>

A teen’s brain is still developing, making it more vulnerable to nicotine addiction.<sup>16</sup>

“Nicotine isn’t that bad for me.”

Nicotine exposure during the teen years can disrupt normal brain development. It can have long-lasting effects, like increased impulsivity and mood disorders.<sup>23-25</sup>

“Just because I vape doesn’t mean I’m going to smoke cigarettes.”

Research shows teens who vape are more likely to try smoking cigarettes.<sup>26</sup>

# Health Concerns

- ▶ Dual Use
- ▶ Flavorings
- ▶ Primary, Secondhand, Thirdhand Aerosol Exposure



**A TIP FROM A FORMER SMOKER**

**I started using e-cigarettes but kept smoking. Right up until my lung collapsed.**

*Kristy, age 35, Tennessee*



*Kristy had smoker's cough and severe shortness of breath. She tried using e-cigarettes to cut down on her smoking. She thought cutting down would make her feel better, but it didn't. She kept smoking cigarettes until her lung collapsed.*

**Even smoking a few cigarettes a day is dangerous.**

**You can quit smoking.**

**CALL 1-800-QUIT-NOW.**

 U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention  
[CDC.gov/tips](https://www.cdc.gov/tips)

#CDCTips



Nicotine is an **acute toxin**



Liquid nicotine can be harmful if **swallowed** or **absorbed through the skin**

**Symptoms include:**

Nausea  
Vomiting  
Increased heart rate  
Increased blood pressure  
Seizures  
Death



Just a few drops of liquid nicotine could result in a **trip to the ER**



Lethality depends on the **weight** of the child and the **concentration** of the liquid nicotine



Ingesting less than **1/4 of a teaspoon** of 1.8% concentrated liquid nicotine can be fatal to a 50 pound child

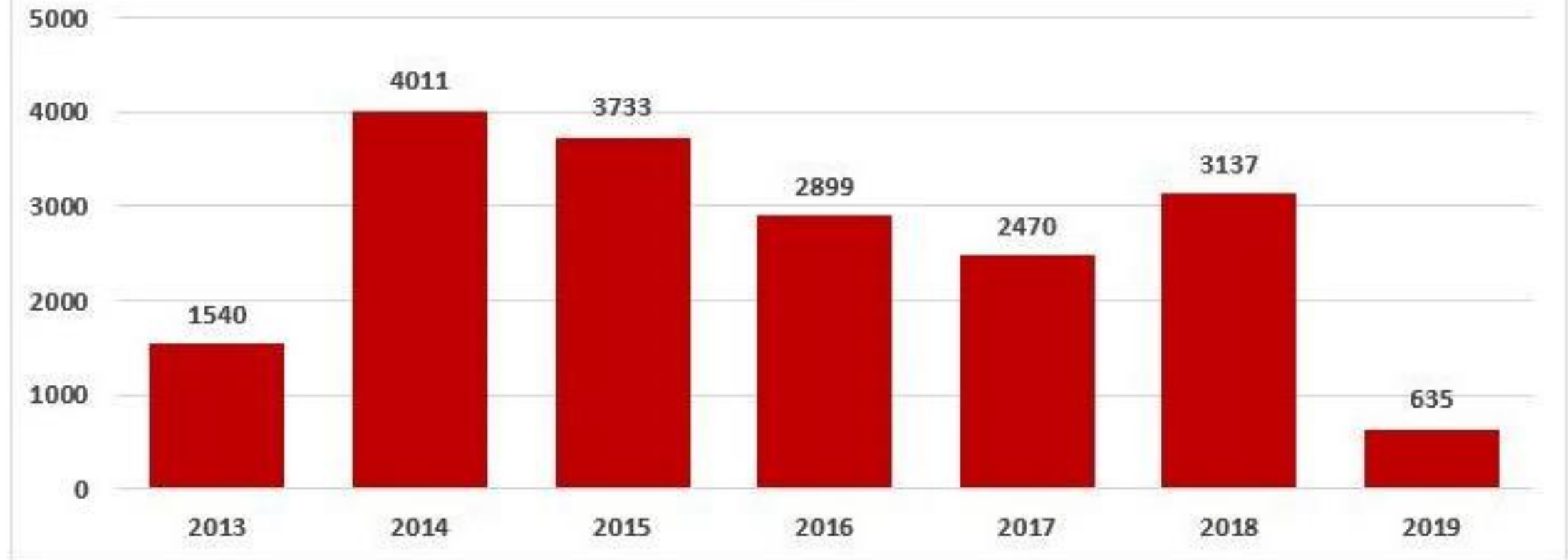


**POISON**  
**Help**  
1-800-222-1222



# Electronic Cigarette and Liquid Nicotine Cases

All Ages



American Association of Poison Control

## Concern: Youth Interest

Most e-cigarettes contain **NICOTINE**, which causes **ADDICTION**, may harm brain development, and could lead to continued tobacco product use among youth.



# Health Concerns

- **Reported Impacts to FDA:**
  - Pneumonia
  - Congestive heart failure
  - Disorientation
  - Seizure
  - Hypotension, and others

# Safety Concerns



- Explosions
- Charger danger
- Fires
- Poisoning
- Hazardous Waste & Litter
- <https://no-smoke.org/wp-content/uploads/pdf/E-Cigarette-Explosions-and-Fires.pdf>

7/12/2015 11:22:09

Acc# 000CT20150039484

SENA, FRANCIS, M  
DOB 11/9/1987  
Age 114Y  
Sex F  
MRN 5851013  
000CT20150039484  
3.00 mm  
SOMATOM Definition  
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Institution: UNMH-BERP-DEFINITION  
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11:21:22

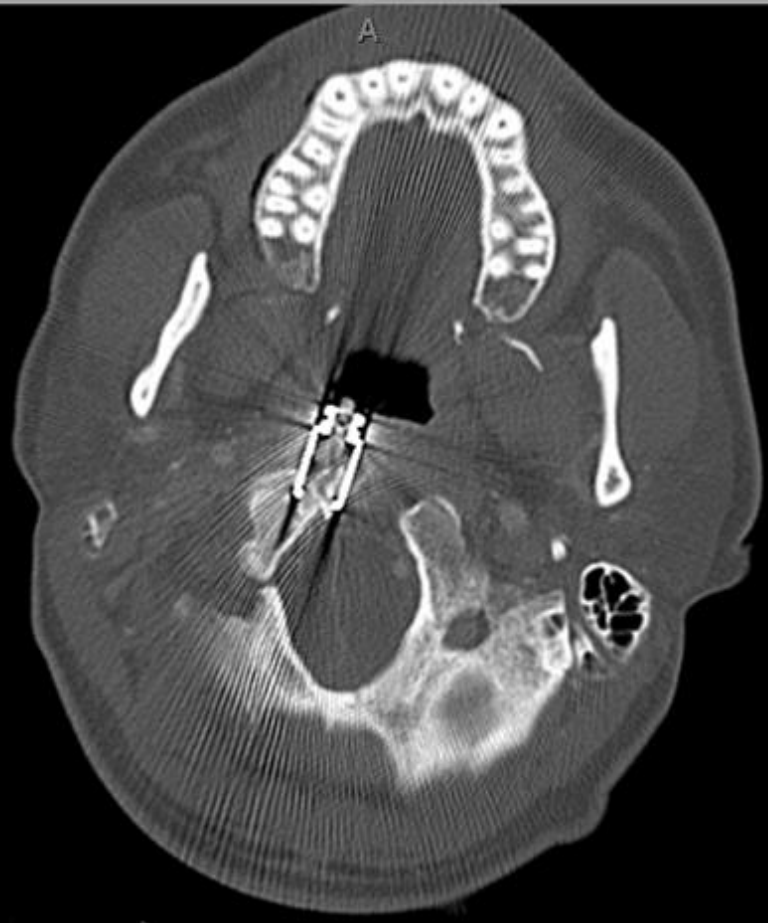


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Slice Location 208.3  
www.fsi 2000/400  
CTDvol 27 78319429843478

None  
Series BONE  
Tech:BJG  
Zoom:139.8%

# Social Concerns

- Social norm reversal.
- Marketed to maintain addiction.
- Playing out of Big Tobacco's playbook:
  - Back on TV.
  - In the workplace.
  - In schools.
  - False health claims.
  - Aimed at youth.



Vapor Shark E-Cigarette Billboard, Florida, 2013

**DEAR SMOKING BAN,**

**blü ELECTRONIC CIGARETTE**

Take back your freedom to smoke anywhere with blü electronic cigarettes. blü produces no smoke and no ash, only vapor, making it the smarter alternative to regular cigarettes. It's the most satisfying way to tell the smoking bans to kiss off. Okay, maybe the second-most satisfying way.

**blü** New blü Smart Pack

**blucigs.com**

8+ only. CALIFORNIA PROPOSITION 65 Warning: This product contains nicotine, a chemical known to the state of California to cause birth defects or other reproductive harm.

# Targeted Marketing

**blu ELECTRONIC CIGARETTES PRESENTS**

**electric lounge**

MARCH 14-16, 2013 • 418 E. 6th St. • AUSTIN, TX

thursday	friday	saturday
<b>DAY 1000 - 1300</b> <b>DIEZEL</b> DIEZEL & QUINCY WILL BRENDA WILSON NEW YORK BOBBI DIEZEL	<b>DAY 1000 - 1300</b> <b>FUTURE CLASSIC/ BOND MUSIC</b> JAMES POLINA EAC OLIVER MAY MAY MAY MAY	<b>DAY 1000 - 1300</b> <b>ON RECORDS/ LAVISH HABITS</b> MAY MAY MAY MAY MAY MAY MAY MAY
<b>NIGHT 1300 - 1800</b> <b>FIREPOWER</b> DIEZEL DIEZEL DIEZEL DIEZEL DIEZEL DIEZEL	<b>NIGHT 1300 - 1800</b> <b>STYLE &amp; COMFORT</b> DIEZEL DIEZEL DIEZEL DIEZEL DIEZEL DIEZEL	<b>NIGHT 1300 - 1800</b> <b>STYLE &amp; COMFORT</b> DIEZEL DIEZEL DIEZEL DIEZEL DIEZEL DIEZEL



**PHILLY WEEKLY**

**SMOKIN' PHILADELPHIA Summer CONCERT CALENDAR**

blu PLUS! ELECTRONIC CIGARETTES

MAY

THE SCRIPT

PURITY KING

ROOTS PICNIC

JUNE

MASON PORTER

ALBUM RELEASE

THEE IRON HEH

**SMOKIN' PHILADELPHIA Summer CONCERT CALENDAR**

blu ELECTRONIC CIGARETTES

JUNE

BEANIE SIGEL

LANKA DEL REY

HOLLY MIRANDA

MELISSA ETHERIDGE

MODE

GALLAGHER

THE EARLY NOVEMBER

THE SHAWN COLVIN

ALBUM RELEASE

THEE IRON HEH

JULY

FIFTEEN FESTIVAL

NEW KIDS ON THE BLOCK

MOBVISSEY

PATRYNIA

MOVEMENT

FARMELL TOUS

PHOB COAST

GENES

D'ANGELO AND THE VAMPIRE

MISSION OF BURMA

THE DELINGER

ESCAPE PLAN

AUGUST

DAR WILLIAMS & JILL SOBULE

CREEFOOD

SECOND RELEASE

MALL & GATES

SHAGONE DRAGONS

HELLIE PICKLER

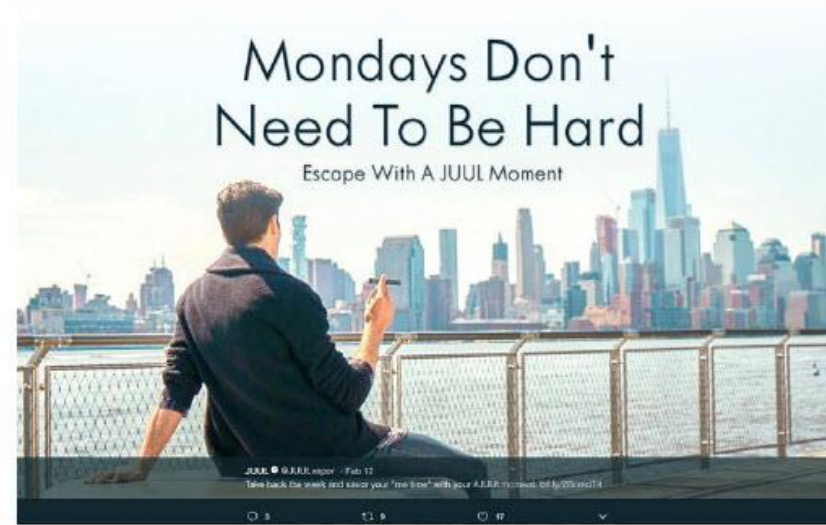
PHILLY BLOOD

WANA WELCOME AMERICA

SHOW OF THE SUMMER





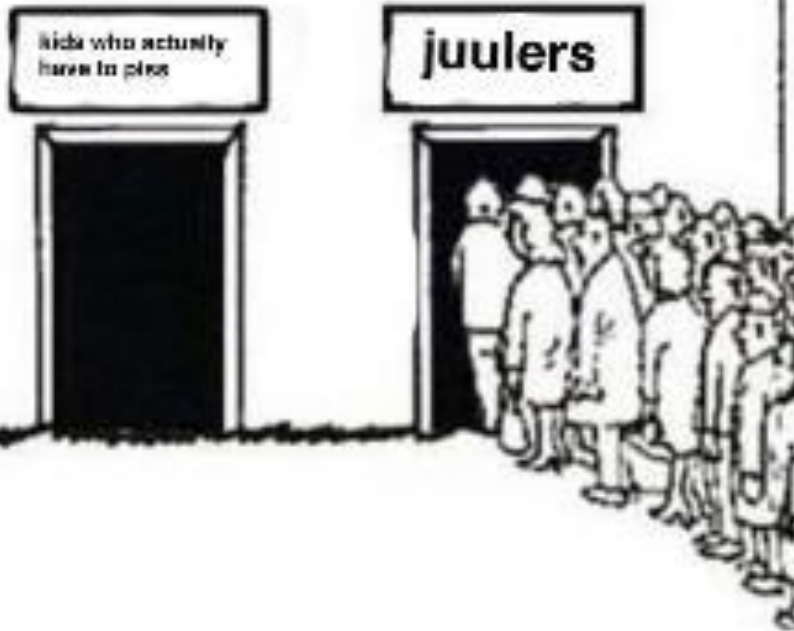


LIMITED EDITION FLAVOR  
COOL CUCUMBER



WARNING: This product contains nicotine. Nicotine is an addictive chemical. © 2017 JUUL Labs, Inc. ALL RIGHTS RESERVED.

# High school bathrooms



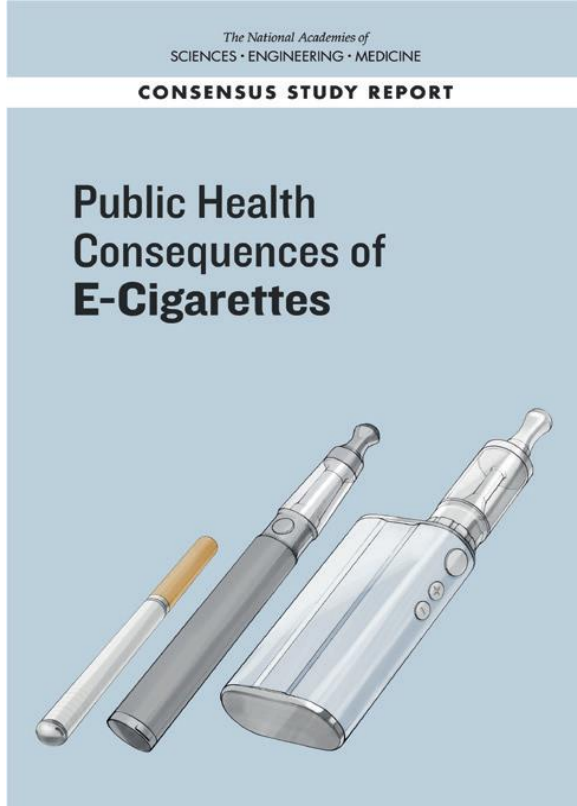
12,066 likes

doit4juul Which one are you 🤔 #D14J

[View all 353 comments](#)

2 DAYS AGO

# What's the bottom line?



- ▶ E-cigarettes (ENDS) products are not safe for youth, young adults, pregnant women or adults who do not currently use tobacco products.
- ▶ If you've never smoked or used other tobacco products or e-cigarettes, don't start.
- ▶ Scientists still have a lot to learn about whether e-cigarettes are effective for quitting smoking.

# FDA Deeming Rule

- FDA had not been regulating the manufacture of e-cigarette components or contents, until the Deeming Rule - August 8, 2016
- Now regulates e-cigarettes and ENDS, hookah, cigars, pipe tobacco (and pipes), dissolvable, nicotine gels, e-liquid
- Gives the FDA authority to regulate the manufacture, distribution and marketing of ALL products that are defined as tobacco products.

# FDA Deeming Rule

In addition, there are several provisions aimed at restricting youth access to tobacco products, including:

- ▶ Not allowing products to be sold to persons under the age of 18 years (both in-person and online)
- ▶ Requiring age verification by photo ID
- ▶ Not allowing the selling of tobacco products in vending machines (unless in an adult-only facility)
- ▶ Not allowing the distribution of free samples.



# ENDS in Michigan

- Federal Law (Deeming) prohibits retailers from selling e-cigarettes, e-hookah, and other ENDS products, their components and refills to minors. This rule applies in Michigan.
  - ***Michigan Law is SILENT on ENDS:***
    - E-cigarettes and their components are not currently subject to the Tobacco Tax.
    - E-cigarettes are not covered by the Smoke-Free Air Law.

To report a violation: Call 1-877-CTP-1373



## FDA RULES FOR **ELECTRONIC NICOTINE DELIVERY SYSTEM (ENDS) SALES**

(Including e-cigarettes, vape pens, e-hookahs, e-cigars, personal vaporizers, and electronic pipes.)

Are you taking the necessary steps to prevent underage tobacco use?



Check photo ID of everyone under age 27 who attempts to purchase ENDS.



Only sell ENDS to customers age 18 and older.\*



Do NOT give away free samples of ENDS, including their components and parts.



Do NOT sell e-cigarettes in a vending machine unless in an adult-only facility.\*\*

Provided by the  
FDA Center for  
Tobacco Products

# ENDS in Michigan

- ▶ Local Action! E-Cig bans do exist in many places...
  - ▶ Parks, beaches, other outdoor locations
  - ▶ Indoors - bars, restaurants, government owned and operated buildings, housing
  - ▶ Sales to minors
  - ▶ Tobacco free schools policies





# What else can be done?

- ▶ Tell the FDA about faulty tobacco products!  
[www.safetyreporting.hhs.gov](http://www.safetyreporting.hhs.gov)
- ▶ Ensure that ALL schools have comprehensive tobacco free policies including ENDS
- ▶ Include ENDS products in indoor smokefree air laws and outdoor clean air policies
- ▶ Support increasing tobacco taxes and using \$ to assist with tobacco prevention and quit programs
- ▶ Support Tobacco 21 as a state law (increasing the age of sale of tobacco products to 21 years). Ask your organization to sign the Resolution of Support offered by Tobacco Free Michigan [tfm@tobaccofreemichigan.org](mailto:tfm@tobaccofreemichigan.org)

# What else can be done?

- ▶ Educate your communities and circles of influence about ENDS products
- ▶ Use Youth to spread the message
- ▶ Talk to retailers in your community about placing all ENDS products behind the counter to restrict youth access
- ▶ If you're a health professional, make sure to ask all your patients, at every visit, about their tobacco use including electronic products. Document this.
- ▶ Keep the Tobacco Section informed of local and county wide ENDS policy and interest. We're here to help!

# Youth Quit Tobacco Resources

## Tobacco Free Kids

Contains fact sheets and advocacy information. Site for information for Kick Butts Day held annually in March. “Taking Down Tobacco” program.  
<http://www.tobaccofreekids.org>

## Smoking Stinks

A youth quit smoking website containing free downloads, quizzes, quit tips and more <http://smokingstinks.org/>

## Smokefree Teen

Free text message quit tobacco service. 24/7 encouragement, advice and tips. Teens can sign up at [www.teen.smokefree.gov](http://www.teen.smokefree.gov) or text QUIT to iQuit(47848)

## The Truth and Finish It

Educates youth about the dangers of tobacco, media and tobacco industry awareness and quitting smoking <http://www.thetruth.com>

# The Truth Initiative: Safer ≠ Safe

truth

VAPING MIGHT BE **SAFER** THAN SMOKING, BUT THAT DOESN'T MAKE IT **SAFE**.

#VAPING

ARTICLE

RELATED: VAPING

ARTICLE

QUIZ

ACTIVITY

ARTICLE

INFINITY

SAFER ≠ SAFE

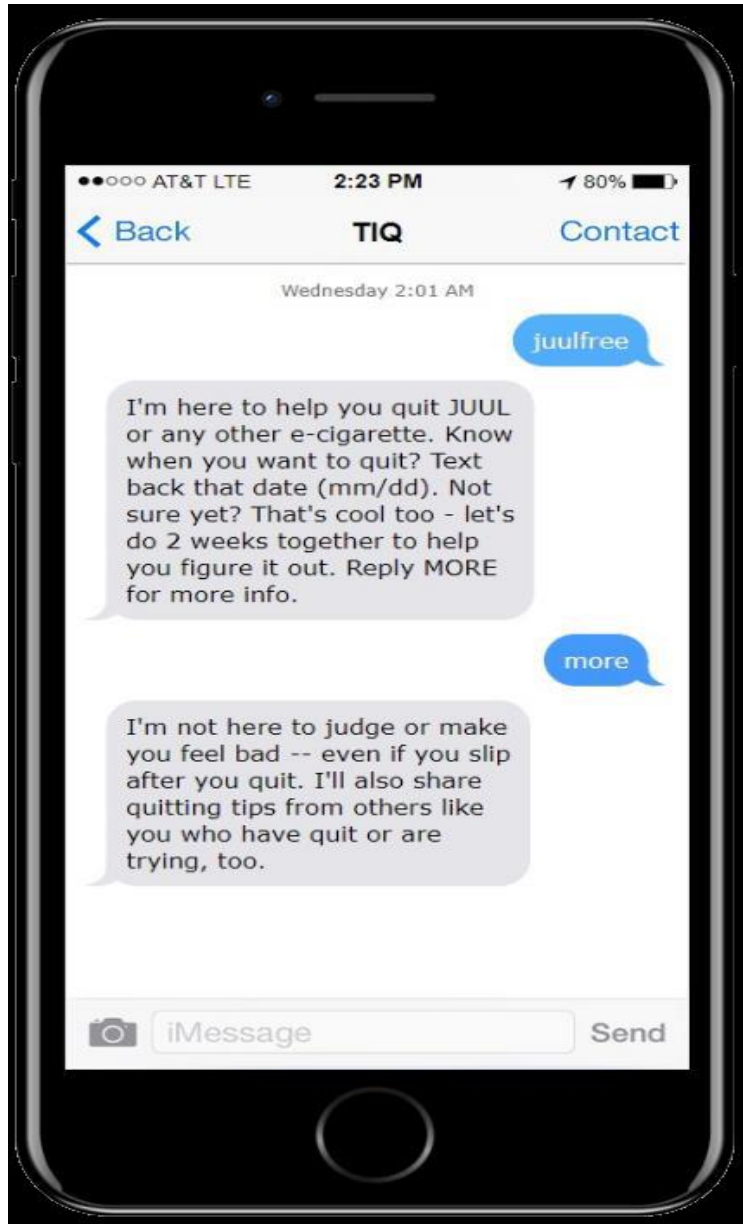
WHICH PUPPET ARE YOU?

AM I A PUPPET?

Select Language

The screenshot shows the Truth Initiative website interface. At the top left is the 'truth' logo. The main headline reads 'VAPING MIGHT BE SAFER THAN SMOKING, BUT THAT DOESN'T MAKE IT SAFE.' with 'SAFER' and 'SAFE' in green. To the right are three social media icons, the hashtag '#VAPING', and an orange 'ARTICLE' button. Below this is a 'RELATED: VAPING' section. The main content area features four interactive elements: an 'ARTICLE' with a woman's image, a 'QUIZ' titled 'SAFER ≠ SAFE' with a puppet wearing sunglasses, an 'ACTIVITY' titled 'WHICH PUPPET ARE YOU?' with a collage of puppets, and another 'ARTICLE' titled 'AM I A PUPPET?' with a puppet scene. A 'Select Language' dropdown menu is visible at the bottom right.

# The Truth Initiative - This is Quitting



## This is Quitting:

You can access the program by:  
texting

“QUIT” to (202) 804-9884

or

Enrolling in the free digital quit  
programs:

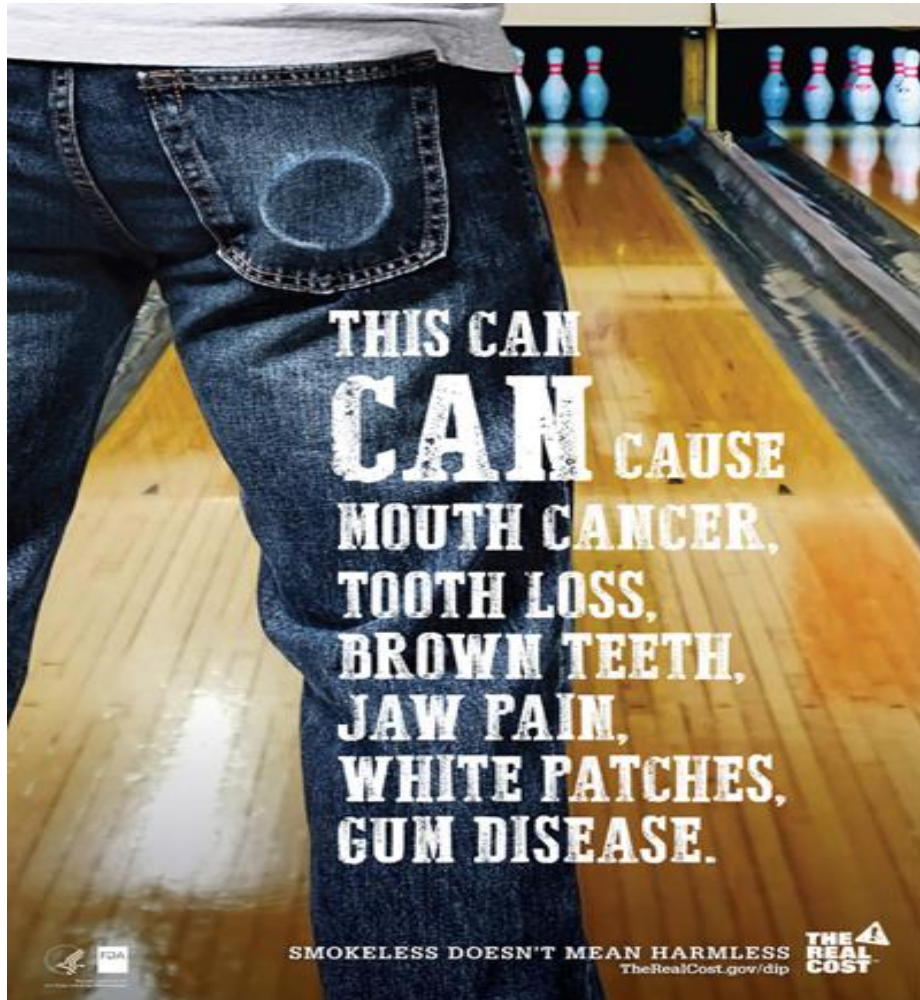
This is Quitting or BecomeAnEX,  
which integrate the text program.

<http://www.thisisquitting.com/>

# Youth Quit Tobacco Resources

## ► The Real Cost

<https://therealcost.betobaccofree.hhs.gov/?g=t>



# “The Real Cost” Youth E-Cigarette Prevention Campaign



<https://www.youtube.com/user/KnowTheRealCost>

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

FDA and Scholastic have joined efforts on ENDS prevention curriculum  
“The Real Cost of Vaping” for grades 9-12

# Tobacco Prevention Toolkit for educators, administrators, parents/guardians and anyone who works with youth



<http://tobaccopreventiontoolkit.stanford.edu>

<https://med.stanford.edu/tobaccopreventiontoolkit/E-Cigs.html>



# ENDs Resources

- ▶ Know the Risks: Surgeon General Advisory: <https://e-cigarettes.surgeongeneral.gov>
- ▶ JUUL and the Guinea Pig Generation factsheet  
<http://www.publichealthlawcenter.org/sites/default/files/resources/JUUL-and-the-Guinea-Pig-Generation-2018.pdf>
- ▶ Healthy Children.org: Health Issues - Tobacco:  
<https://www.healthychildren.org/English/health-issues/conditions/tobacco/Pages/default.aspx>
- ▶ Know the Risks: Talk with your Teen about e-cigarettes- A tip sheet for Parents  
[https://ecigarettes.surgeongeneral.gov/documents/SGR\\_ECig\\_ParentTipSheet\\_508.pdf](https://ecigarettes.surgeongeneral.gov/documents/SGR_ECig_ParentTipSheet_508.pdf)
- ▶ Tobacco Free Kids JUUL and Youth: Rising E-cigarette Popularity:  
<https://www.tobaccofreekids.org/assets/factsheets/0394.pdf>

# Quit Tobacco Resources

- ▶ [www.Michigan.gov/tobacco](http://www.Michigan.gov/tobacco)

MI Department of Health and Human Services Tobacco Section website offers resources, fact sheets and information on quitting.

- ▶ <https://Michigan.quitlogix.org>

The Michigan Tobacco Quitline site offers information on how to quit, a smoking calculator and more. Works with people of all ages, including youth. 1-800-QUIT-NOW

# Questions?

## Contact:

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