# The Truth About Electronic Cigarettes (a.k.a. Vape Products)

Presented by:

Tobacco Section, MI Department of Health and Human Services



# Highlights of today's presentation

- Describe how electronic cigarettes 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 e-cigarette related resources

### Electronic Cigarettes (vape products)

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### **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.

# Electronic cigarettes 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.
- I 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

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Image Credit: via thenounproject.com



#### 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







Benzene



Propylene Glycol

Formaldehyde

Toluene



CROWN



Isoprene

Acetone





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







#### 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.

Body

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#### USB charging dock

The battery is charged by dropping the body on a magnetic USB adapter. It takes an hour to fully charge and will last up to 200 puffs, a full day of regular use.



Imperial

Tobacco

Altria Group

British

American Tobacco

15 11 12 41

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 <u>not aware</u> that JUUL pods <u>always</u> contain nicotine.
- Nearly half of those who are aware of JUUL believe it is "a lot" or "a little" LESS harmful than cigarettes.







# Tank:

This product was very popular when e-cigarettes first hit the market.

E-juice required

Very heavy compared to the new generation products









New: 35 mL per bottle and more attractive flavors and packaging

### Sourin ishare:

This device is very similar to the JUUL and has the capability to hold JUUL pods.

### Price: \$17.99



The "counterfeit" pods which fit in both the JUUL and the Suorin iShare

There is 1 additional pod and pack of 5 costs less than the JUUL pods





Price: \$14





Suorin Air





Khree UFO

SMOK Rolo Badge

KHREE UFO (CHEECE\*

# Nord Kit

- Button triggered device
  - To start/allow user to use
  - Provides information about battery life
  - E-juice window
  - When button is held for more than 8 seconds the battery will shut off ("protection")



• Price: \$23.95

### Suorin Edge

- Sleek design
- Comes with 2 batteries (removable)
- "Childproof Lock" click lock key 5 times to unlock
- If in use for more than 5 seconds, battery will turn off

Price: \$29.95 Edge cartridge sold separately \$3.99



### MICO kit

- Can fit in the palm of your hand
- Sleek design, multicolored fluid lines look like an abstract oil painting
- Comes with a lanyard for "both decorative and portability purposes"



#### Price: \$24.95







# Dripping





# Zig Zag 335





# IQOS - <u>I</u> <u>Quit</u> <u>Ordinary</u> <u>Smoking</u> 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.



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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.

2017 E-cigare	tte Data - A	Adults	
	<u>USA</u>	<u>MICHIGAN</u>	
Current e-cigarette user	4.6%	4.9%	
Former e-cigarette user	16.3%	17.4%	
Never e-cigarette user	79.3%	77.7%	

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#### **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: I I PALL TRADING THE AVER SURGE IN YOUTH CURRENT E-CIGARETTE USE - 1.5 Million More Students Used E-Cigarettes in 2018 vs 2017 20.8% Increase Increase Among Middle Among High School Students School Students 4.9% 11.7% 3.3% 2018 2017 2018 2017

### Percentage of high school students who used an electronic cigarette product during the past 30 days

in 18 Counties in Michigan- MiPHY 2015-16 compared to 2017-18

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	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	<mark>77%</mark>
5	Jackson	16.7	23.8	43%
6	Branch	14.4	30.2	<mark>109%</mark>
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	<mark>96%</mark>
11	Oakland	16	28.4	<mark>78%</mark>
12	Manistee	16.2	31.1	<mark>92%</mark>
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%



National Youth Tobacco Survey as reported in Cullen et al., MMWR 2018 http://bit.ly/CDCVA18 WWW.CDC.GOV



# The Adolescent Brain

Human brain matures at about age 25

Nicotine addiction more likely the earlier one initiates

Mood disorders, lower impulse control, attention and learning problems

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



### **Common myths** believed about vaping, along with the facts.

Vapes get their flavors from chemicals. While these

flavorings are safe to eat in food, they're not safe to

Some buttery-flavored vapes like caramel contain diacetyl and acetoin. Inhaling diacetyl has been linked to popcorn

inhale. Inhaling flavor chemicals can harm your lungs.<sup>11</sup>

"It's just water vapor."

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>

But

it's

not.

"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>

"It's just

flavoring."

Want an example?

"My vape says it's nicotine-free. There's no way I'll become addicted."

lung, a lung disease that doesn't have a cure.<sup>11</sup>

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>

# Why the Rise in E-cigarette Use?

Targeted tobacco industry marketing



Lack of regulation



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

- November 15, 2018: the FDA proposes to restrict the sale of some flavored electronic cigarettes 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







# "Trendy" Products









# Social Media Marketing



#### JUL. juulvapor • Following

juulvapor The freedom of a #JUULmoment. C by @devinwhetstone .

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

spencerhcain @Chelsea.grieco cash me in the office bathroom

sleepyboy369 @chrimoulto freedom hell yea.

ohmcityvapes Beautiful

katemorganmcleod @doresandre you look amazel You a star +

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scootsadam i just lost mine in my own

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paragraphy 25.

Add a comment...

JUUL @ @JUULvapor - 4 Jun 2015

JUUL Having way too much fun at the #JUUL launch party #LightsCameraVapor #NYC



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# **Targeted Marketing**

















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









#### Instagram



### can't stand it when people pee in the juul room

Snapchat

### LACK OF REGULATION

- TV, radio, billboard
- Point of Sale

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# Health Concerns

### Dual Use

### ► Flavorings

### Primary, Secondhand, Thirdhand Aerosol Exposure



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

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

#CDCTips



# Health Concerns: Reported Impacts to FDA

Pneumonia

> Oral Health (mucosal lesions)

Asthma

> Cardiovascular Disease

Disorientation

> Seizure

Skin Disorders (contact dermatitis)

> Hypotension, and others

### Safety Concerns



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











#### American Association of Poison Control









### 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.



### What's the bottom line?

The National Academies of SCIENCES • ENGINEERING • MEDICINE

#### CONSENSUS STUDY REPORT

Public Health Consequences of **E-Cigarettes** 



E-cigarettes 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 ecigarettes, don't start.

Scientists still have a lot to learn about whether e-cigarettes are effective for quitting smoking.

# Food & Drug Administration (FDA) Deeming Rule

- FDA had <u>not</u> been regulating the manufacture of e-cigarette components and parts, until the Deeming Rule - August 8, 2016
- With deeming, FDA regulates ALL tobacco products. This includes e-cigarettes, hookah, cigars, pipe tobacco (and pipes), dissolvable, nicotine gels, e-liquid which ARE DEFINED AS TOBACCO PRODUCTS
- Gives the FDA authority to regulate the manufacture, distribution and marketing of ALL products that are defined as tobacco products



### Food & Drug Administration Deeming Rule

Restricts youth access to tobacco products:

- No sale to persons under the age of 18 years (both in-person and online)
- Requires age verification by photo ID
- No sale of tobacco products in vending machines (unless in an adultonly facility)
- No distribution of free samples



# **Electronic Cigarettes in Michigan**

Federal Law (FDA Deeming Rule) prohibits retailers from selling e-cigarettes, e-hookah, and other electronic nicotine device products, their components and parts to minors.

Since August 8, 2016, this rule <u>has applied</u> in Michigan: no sales of electronic cigarettes, their components and parts to minors.

## Electronic Cigarettes in Michigan

Senate Bill 106 and Senate Bill 155, signed into law on 6/4/19:

- Both bills amend the Youth Tobacco Act
- SB 106 defines e-cigarettes, alternative nicotine products, vapor products and other emerging tobacco products SEPARATELY FROM TOBACCO PRODUCTS
- SB 155 defines 'liquid nicotine' and 'liquid nicotine container' and requires containers to meet a minimum safety standard and storage of vapor products in a locked case or behind the counter

### Problems Caused by Defining E-cigarettes Separately from Tobacco Products

- Appeal to youth
- Confusion with the Federal Deeming Rule
- Not subject to the same evidence-based measures that govern tobacco products:
  - Not taxed
  - ► Not covered by the state's Smokefree Air Law
  - Lack of advertising restrictions -still marketed on TV, radio, social media, etc.

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

# Electronic Cigarettes 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

Tobacco free schools policies



## What else can be done?

- Tell the FDA about faulty tobacco products! <u>www.safetyreporting.hhs.gov</u>
- Ensure that ALL schools have comprehensive tobacco free policies including electronic cigarettes
- Include electronic cigarette 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 <u>tfm@tobaccofreemichigan.org</u>

### What else can be done?

- Educate your communities and circles of influence about ecigarette products
- Use Youth to spread the message
- Talk to retailers in your community about placing all e-cigarette 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 ecigarette policy and interest. We're here to help!

# My Life, My Quit – A Quit Tobacco and Vaping Program for Teens

- First comprehensive program designed just for teens
- Teen focused messages
- Five real time coaching sessions via live text messaging, online chat or phone
- Specially trained coaches
- Certificate of completion

### TOLL FREE: 1-855-891-9989

### mylifemyquit.com



MY LIFE MY QUIT

WANT TO SAVE \$600 A YEAR? CUT OUT VAPING. Text "Start My Quit" to 855-891-9989 or call.



# 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. <u>http://www.tobaccofreekids.org</u>

### **Smoking Stinks**

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

### Smokefree Teen

Free text message quit tobacco service. 24/7 encouragement, advice and tips. Teens can sign up at <u>www.teen.smokefree.gov</u> 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 <u>http://www.thetruth.com</u>

### The Truth Initiative: Safer ≠ Safe

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### The Truth Initiative - This is Quitting

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I'm not here you feel bad after you qui quitting tips f you who have trying, too.	to judge or mak even if you sl t. I'll also share from others like e quit or are	te ip
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### 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

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

### **Electronic Cigarette Resources**

- Know the Risks: Surgeon General Advisory: <u>https://e-cigarettes.surgeongeneral.gov</u>
- JUUL and the Guinea Pig Generation factsheet <u>http://www.publichealthlawcenter.org/sites/default/files/resources/JUUL-and-the-Guinea-Pig-Generation-2018.pdf</u>
- Healthy Children.org: Health Issues Tobacco: <u>https://www.healthychildren.org/English/health-issues/conditions/tobacco/Pages/default.aspx</u>
- Know the Risks: Talk with your Teen about e-cigarettes- A tip sheet for Parents

https://e-cigarettes.surgeongeneral.gov/documents/SGR\_ECig\_ParentTipsheet\_508.pdf

Tobacco Free Kids JUUL and Youth: Rising E-cigarette Popularity: <u>https://www.tobaccofreekids.org/assets/factsheets/0394.pdf</u>

### **Quit Tobacco Resources**

### 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 about E-Cigarettes?

To learn more about the use of e-cigarettes and how it impacts our state, please contact:

Carolyn Chaudhary MDHHS Tobacco Section E-mail: chaudharyc@Michigan.gov

# **Need Help?**

For technical assistance in carrying out any of the activities mentioned in this presentation, or for information about e-cigarette educational materials that you can use, please contact:

> Elaine C. Lyon MDHHS Tobacco Section E-mail: <u>lyone@michigan.gov</u>