NEW WAVE OF YOUTH TOBACCO USE:
Vaping and JUULs

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Maryland State School Health Council (MSSHC)
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MISSION AND VISION

MISSION
The mission of the Prevention and Health Promotion Administration is to protect, promote and improve the health and well-being of all Marylanders and their families through provision of public health leadership and through community-based public health efforts in partnership with local health departments, providers, community based organizations, and public and private sector agencies, giving special attention to at-risk and vulnerable populations.

VISION
The Prevention and Health Promotion Administration envisions a future in which all Marylanders and their families enjoy optimal health and well-being.
Changing Landscape of Popular Tobacco Products

Source data 2000-2016: Maryland Youth Risk Behavior Survey/Youth Tobacco Survey (YRBS/YTS); April 2018.
What are ENDS?

- ENDS: Electronic Nicotine Delivery System
- ESDs: Electronic Smoking Devices
- Electronic Cigarettes
- E-Cigarettes
- Vapes, pods, mods
- JUULs

[Diagram showing various ENDS devices]
What are “JUULs”?

Marketing Appeal: Discreet, Flavored, Affordable

A Juul starter kit comes with the device, a charger and four pods of a flavored 5% nicotine solution. CREDIT: Juul Labs PHOTO: JUUL

Our JUUL Flavor Multipack contains one JUULpod each of Virginia Tobacco, Mint, Mango, and Creme.

Each pack contains 4 pods.

$15.99
What are “JUULs”?  

- Considerably higher nicotine than traditional e-cigarettes.  
- Contain nicotine ‘salts’ to create a smoother, stronger hit.  
- Increases the ‘buzz’ and reduces the burn.

JUUL – Nicotine Delivery  

**JUUL Higher content than most e-liquids**

“Each JUULpod contains 59mg/mL of nicotine per pod, approximately equivalent to 1 pack of cigarettes or 200 puffs.” – JUUL website

Source: [https://support.juulvapor.com/home/learn/faqs/juulpods-juice](https://support.juulvapor.com/home/learn/faqs/juulpods-juice) (no longer active)
More Facts on JUUL...

juul sales increase more than 600% in a year, underscoring popularity among teens

JUUL e-cigarette sales increased 641% during just one year, from 2.2 million devices sold in 2016 to 16.2 million devices sold in 2017, according to a research letter by the Centers for Disease Control and Prevention published in JAMA. The CDC calls skyrocketing sales of JUUL a "danger to youth" and says its popularity among young people "threatens our progress in reducing youth e-cigarette use."

October 15, 2018

high-nicotine e-cigarettes may reverse declines in youth tobacco use

Without stronger regulation, high-tech e-cigarettes that can deliver nicotine at levels comparable to cigarettes — like JUUL and the many similar products and copycats — could "undo years of progress if a new generation of young people becomes addicted to nicotine," Robin Koval, CEO and president of Truth Initiative®, and other Truth Initiative leaders write in an opinion article published in the Journal of the American Medical Association.

71.2%

The most popular e-cigarette JUUL has only been on the market a few years, but accounts for 71.2 percent of e-cigarette sales as of August 2018.

September 21, 2018
What are Maryland Laws for ENDS? – SCHOOLS

• **Statewide Law (MSDE)**
  - The sale or use of tobacco in any form (including ENDS) is prohibited in school buildings at all times.
  - In addition, the sale or use of tobacco in any form is prohibited on school grounds during the official school day.

• **Expanded Local Laws**
  - The sale, use, or possession of tobacco in any form by students is prohibited in all Baltimore County Public Schools, in school system buildings, on school grounds, and at any school-sponsored activity. – *Baltimore County*
  - The use or possession of any tobacco product or electronic cigarettes by students on school property and school busses at all times or at school-sponsored events. – *Cecil County*

Source: MD School System Tobacco and ENDS Policies provided by the University of Maryland Baltimore, School of Law, Legal Resource Center
What’s the Risk?
Youth ENDS Users Increased Likelihood of Engaging in Risk Behaviors

- 34% of youth ENDS users also use cigarettes, 35% use cigars, and 25% use smokeless tobacco.
- Flavored ENDS products are almost 10 times more popular than tobacco or menthol flavored e-cigarettes – 64% of youth e-cigarette users reported using fruit flavored ENDS products.

What’s the Risk?
Nicotine Harms the Developing Brain

- **Addiction**
  - Adolescents can get addicted more easily than adults as their brains are still developing.
  - Nicotine can prime the adolescent brain for addiction.
  - Early onset of substance abuse, including tobacco use, is associated with greater severity of addiction in adulthood.

- **Additional Effects on the Brain**
  - Changes the way synapses are formed, which can harm the parts of the brain that control attention and learning.
  - Can lead to mood disorders and permanently reduced impulse control.
What’s the Risk?
Dispelling Misperceptions: “It’s Just Harmless Vapor”

- Propylene glycol
- Glycerin
- Flavorings (many)
- Nicotine
- NNN
- NNK
- NAB
- NAT
- Ethylbenzene
- Benzene
- Xylene
- Toluene
- Acetaldehyde
- Formaldehyde
- Naphthalene
- Styrene
- Benzo(b)fluoranthene

- Benzaldehyde
- Valeric acid
- Hexanal
- Fluorine
- Anthracene
- Pyrene
- Acenaphthylene
- Acenaphthene
- Fluoranthene
- Benz(a)anthracene
- Chrysene
- Retene
- Benzo(a)pyrene
- Indeno(1,2,3-cd)pyrene
- Benzo(ghi)perylene
- Acetone
- Acrolein
- Silver
- Nickel
- Tin
- Sodium
- Strontium
- Barium
- Aluminum
- Chromium
- Boron
- Copper
- Selenium
- Arsenic
- Nitrosamines,
  Polycyclic aromatic hydrocarbons
- Lead
- Magnesium
- Manganese
- Potassium
- Titanium
- Zinc
- Zirconium
- Calcium
- Iron
- Sulfur
- Vanadium
- Cobalt
- Rubidium
What’s the Risk?

SAFER ≠ SAFE

truth
Marketing Appeal: Time-limited Offers

LIMITED EDITION: BLUSH GOLD DEVICE KIT
(May 2018)

NEW EDITION: SILVER DEVICE KIT
(July 2018)

TURQUOISE DEVICE KIT
(October 2018)
Marketing Appeal: Enticing flavors and easy to buy ...
Youth Access and JUUL IN SCHOOL

Truth Initiative® survey

- More than 1,000 youth between 12 and 17 years old surveyed
- Completed in April 2018

Findings

- 18 percent of students had seen JUUL used in school.
- Use of the product referred to as "JUULing,"
- JUUL is so distinctive, it is perceived as its own category.
Addressing JUUL Use in Schools

THE NEW YORK TIMES, April 2, 2018

“...asked if she could stand at the back of the class and shake her foot when she started to feel the twitch to vape.”

“...asked the school nurse about getting...nicotine gum or a patch, to help him get through the school day without violating the rules prohibiting vaping.”

“They don’t want to be kicked out of school...and they don’t want to have a bad relationship with their parents. They continue to use because it’s an addiction.”

“With so many students caught multiple times, some schools have moved from punishment to intervention, requiring students caught vaping to receive counseling or substance abuse treatment.”
Prevention Efforts?

JUUL Labs Announces Comprehensive Strategy to Combat Underage Use

Company Will Support State and Federal Initiatives to Raise Minimum Purchase Age to 21 and Work with a Group of Public and Tobacco Control Officials in As Part of $50 Million Initiative

SAN FRANCISCO (April 26, 2018) – Building on its existing youth prevention and education programs, JUUL Labs today announced it will take additional decisive action by actively supporting state and federal initiatives to raise the minimum age to 21 to purchase tobacco products as part of an initial investment of $50 million over the next three years dedicated to independent research, youth and parent education, and community engagement efforts.

JUUL Labs has seen significant success in its efforts to enable adult smokers to transition from cigarettes and also recognizes that young people have become aware of and gained access to its products. The company is committed to combating underage use of its products and engaging with the U.S. Congress and Food and Drug Administration (FDA) in the development of policies that balance the needs of the adult health community.

JUUL Labs will work with Tom Bieby, the Iowa Attorney General, and a group of public officials and tobacco control individuals to further efforts to reduce JUUL out of the hands of young people. In addition, Attorney General Bieby and several state groups will work with JUUL to develop a transparent and effective framework for independent research focused on the scientific and societal implications of vapor products.

“Our company exists to eliminate cigarettes and help the more than one billion smokers who are not able to quit,” said JUUL Labs Chief Executive Officer, Dan Barr. “We are already making progress on our efforts to make adult smokers to transition away from cigarettes and the risks associated with smoking to a safer alternative. As we continue to innovate and introduce new products to the market, at the same time, we are committed to deterring young people, as well as adults, who do not currently smoke, from using our products. We remain more committed than ever to the public health mission that JUUL was founded to achieve.”

The company’s support for state and federal efforts to raise the minimum age of purchase for JUUL, and other vapor products to 21 follows JUUL’s announcement in August 2017 that it had raised the minimum age of purchase on its own e-commerce site to 21, even though the legal age of purchase in many states remains at 18.

“I don’t think any tobacco or nicotine delivery device company should be doing their own prevention work,” said Bonnie Halpern-Felsher, Ph.D., a developmental psychologist and pediatrics professor at Stanford University School of Medicine.

Ms. Halpern-Felsher said the flavors of JUUL products are huge draws for teens and that the FDA should ban all flavored tobacco products.

“The comparison is e-cigarette or JUUL versus nothing,” said Ms. Halpern-Felsher, whose research focuses on understanding and reducing health risks among youths related to tobacco, alcohol, drugs and other risk-seeking behavior. “A lot of the youths who are using e-cigarette or JUUL never intended on smoking. So it’s not a harm-reduction conversation that a lot of people are trying to make this. This is an initiation of any tobacco product.”

The 2012 Surgeon General’s Report documented the ineffectiveness of tobacco industry-sponsored youth prevention programs.

The 2012 Surgeon General’s report, Preventing Tobacco Use Among Youth and Young Adults (2012 SGR), reviewed tobacco industry-sponsored youth prevention initiatives in depth, including school-based programs. It found that the tobacco industry’s youth smoking prevention activities and programs have not provided evidence that they are effective at reducing youth smoking. Federal, state and local health officials have supported tobacco prevention programs in part because of Philip Morris’s misleading ads claiming to help the tobacco industry itself, leading to easier for its views to be heard on legislative issues. 123

Industry-sponsored youth prevention programs are intended to promote positive attitudes toward the industry. According to the 2012 Surgeon General’s Report:

• “The industry uses youth prevention efforts to convey to the public, policy-makers, judges, and members of the media that it is doing something it has not been able to accomplish for decades. In this way, the programs seem to promote positive attitudes about the tobacco industry, which is the purpose these programs are intended to serve. This potential for public imperilment or public damage to the public because of legislation, and published accusations, charges, and any inconsistencies or negative see prevention smoking among youth.”

School-based prevention programs are most effective when part of a comprehensive approach to reduce and prevent tobacco use.

• The 2012 Surgeon General’s report concluded: “The evidence is sufficient to conclude that school-based programs with evidence of effectiveness, containing specific components, can produce at least short-term effects to reduce the prevalence of tobacco use among school-aged youth.”

• Because there is limited evidence of the long-term effectiveness of school-based programs to prevent smoking, school programs may not be fully effective as a stand-alone strategy to reduce and prevent tobacco use.

• However, school-based prevention initiatives free of tobacco industry influence, including enrollment of tobacco-free schools, can be undertaken in conjunction with proven, community-based youth tobacco prevention strategies. 123 These can include:

  • Training school staff to recognize signs that young people use the dangers of tobacco use
  • Strategies to raise the price of tobacco products, which reduce youth initiation and use
  • Comprehensive media-free ads that utilize smoking and tobacco use in public locations
  • Additional promising youth prevention strategies that could be part of a comprehensive strategy include, but are not limited to, raising the age of tobacco sales to 21, restrictions on tobacco product sales, and regulations that e-cigarette products kept behind the store counter or in a locked store.

Washington Times, 4/1/18
Recommended Curriculum & Resources

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 arm 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.

- AGES: 11-18 years (Grades 6-12)
- DURATION: Four lessons (30-40 minutes each)
- COST: Free

Thank you to support from Lila and Henry and the "Next Wave" campaign.

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

https://med.stanford.edu/tobaccopreventiontoolkit/E-Cigs.html
What’s Being Done to Combat the Problem?

FTC and FDA Take Action Against Flavored Products

FDA News Release

FDA, FTC take action against companies misleading kids with e-liquids that resemble children’s juice boxes, candies and cookies

Warning letters are part of joint effort to protect youth from dangers of nicotine and tobacco products and part of FDA’s new Youth Tobacco Prevention Plan

May 1, 2018

FDA chief calls youth e-cigarettes an ‘epidemic’

The Washington Post

FDA Commissioner

Gottlieb says US weighing ban on online e-cigarette sales

9/25/18

FDA News Release

FDA advances investigation into whether more than 40 e-cigarette products are being illegally marketed and outside agency’s compliance policy

Agency seeks more information from companies as it continues to pursue its Youth Tobacco Prevention Plan amid evidence of sharply rising e-cigarette use among kids

October 12, 2018

FDA Conducted Surprise Inspection of Juul’s Headquarters

The Wall Street Journal

October 2, 2018
What’s Being Done to Combat the Problem?

[Image: Don't be a lab rat. Watch the video.]

## What’s Being Done to Combat the Problem?

[Image: VAPE'S LATEST EXPERIMENTS]

### ADDITIONAL RESEARCH

- **E-juice**: Though popular, it is unregulated and can be toxic in high doses. It can cause harmful effects, including seizures, respiratory failure, and death.

- **Vegetable glycerin (VG)**: It can be toxic when inhaled or ingested in large quantities. It can cause severe respiratory distress and other health issues.

- **Propylene glycol (PG)**: Though generally considered safe, it can cause respiratory irritation and other health problems.

- **Diacetyl**: A compound found in some e-liquids that can cause lung disease.

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What’s Being Done to Combat the Problem?
Resources to Address Tobacco Use

• The Maryland Tobacco Quitline has a confidential, specialized cessation protocol for youth 13-17 years of age.

• Free Resources available to order from www.smokingstopshere.com
What’s Being Done to Combat the Problem?
Hotline Established to Report Illegal Sales

If you witness illegal sales of tobacco products, including ENDS to anyone under the age of 18

Call 1-866-703-3266

Maryland Department Health’s Hotline

www.NoTobaccoSalesToMinors.com
Today’s youth are embracing these new products as their own, developing a new habit that fits the image of this generation … and addicting themselves to nicotine at potentially higher levels than has been seen in decades.

dawn.berkowitz@maryland.gov
410.767.2920

Illegal Retail Sales of Tobacco Products (Including ENDS) Hotline: 1-866-703-3266