Montgomery County Office of Drug and Alcohol

VAPING TOOLKIT

Resources for schools, parents, educators, and health care providers

(Revised August 2020)
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What Are E-Cigarettes?
Vaping and E-Cigarettes

E-cigarettes or “vapes” are battery-operated devices that produce vapor instead of smoke. Instead of being packed with tobacco, they have cartridges filled with a liquid that contains flavorings and nicotine.

Since e-cigarettes were first introduced to the US in 2007, scientists have found harmful ingredients in the devices, including:

- ultrafine particles that can damage the lungs;
- flavorings that are linked to serious lung disease;
- volatile organic compounds (like benzene, which is found in car exhaust)
- and poisonous metals, like nickel, tin, and lead.

Of additional concern are the findings that e-liquids (or “vape juice”) contained in vaping products are not a final product. Reactions that occur as the e-liquid is heated create new molecules and acetals that are not included in the ingredients lists or regulations testing.¹

E-cigarettes recently surpassed conventional cigarettes as the most commonly used tobacco product among youth.² Vaping has recently taken center stage in the public eye, due to the vaping-related illness (EVALI) that has been linked to 42 deaths to date and prompted eight states to take action to reduce access. In 2018, the Surgeon General declared a youth vaping epidemic.³ According to the most recent data from the Centers for Disease Control and Prevention (CDC), between 2017-2018, there was a 78 percent rise in e-cigarette use by high-school students and a 48 percent rise in use by middle-school students. Preliminary results for 2019 report that 27.5 percent of American high school students used an e-cigarette in the previous 30 days, a 32 percent increase from 2018.⁴

To date, no e-cigarette or vaping product has undergone a government health and safety review, meaning that all products on the market are currently unregulated.⁵ Aggressive marketing and misinformation have resulted in a misinformed consumer base that is largely unaware of the health risks of vaping and perceives vaping as a harmless alternative to smoking traditional cigarettes.
Nicotine and the Adolescent Brain

Adolescents are uniquely at risk for long-term, long-lasting harms of nicotine, which can change the way synapses are formed, harming the parts of the brain that control attention and learning. Adolescent nicotine use can increase the risk of substance misuse and addiction, mood disorders, and permanent lowering of impulse control. Early nicotine use also makes adolescents more sensitive to other drugs in the future, including traditional cigarettes. Young people who vape are four times more likely to go on to smoke cigarettes than those who don’t. And Juuling delivers more nicotine than a combustible cigarette—a single Juul pod is equivalent to 20 cigarettes—which makes all of these risks even more dramatic.

Vaping-Related Lung Injury

In the summer of 2019, an outbreak of vaping-related lung injuries swept the nation. Gradually, more and more people were hospitalized with symptoms including cough, shortness of breath, chest pain, nausea, vomiting, abdominal pain, diarrhea, fever, chills, and/or weight loss. Some patients reported symptoms having developed over the course of just a few days, while others reported that their symptoms developed over several weeks. As of November 13, 2019, the CDC has reported 2,051 cases of e-cigarette, or vaping, product use associated lung injury (EVALI) and 42 deaths have been confirmed. As of November 8, 2019, CDC laboratory testing of lung fluid samples from EVALI patients has found vitamin E acetate present. This is the first detection of a potential chemical of concern in samples from patients of this outbreak. THC was identified in 82 percent of the samples and nicotine was identified in 62 percent of the samples. The exact cause of death has not yet been determined and it remains unclear which vaping products present the highest the risk.

Fast Facts

1. Young people who vape are four times more likely to go on to smoke cigarettes than those who don’t.
2. A single Juul pod is equivalent to 20 cigarettes.
3. Harmful ingredients have been found in vapes, like poisonous metals and chemicals like benzene, which is also found in car exhaust.

Sources

E-cigarettes have the potential to benefit adult smokers who are not pregnant if used as a complete substitute for regular cigarettes and other smoked tobacco products.

E-cigarettes are not safe for youth, young adults, pregnant women, or adults who do not currently use tobacco products.

While e-cigarettes have the potential to benefit some people and harm others, scientists still have a lot to learn about whether e-cigarettes are effective for quitting smoking.

If you’ve never smoked or used other tobacco products or e-cigarettes, don’t start.

WHAT ARE E-CIGARETTES?

E-cigarettes are known by many different names. They are sometimes called “e-cigs,” “e-hookahs,” “mods,” “vape pens,” “vapes,” “tank systems,” and “electronic nicotine delivery systems.”

Some e-cigarettes are made to look like regular cigarettes, cigars, or pipes. Some resemble pens, USB sticks, and other everyday items.

E-cigarettes produce an aerosol by heating a liquid that usually contains nicotine—the addictive drug in regular cigarettes, cigars, and other tobacco products—flavorings, and other chemicals that help to make the aerosol. Users inhale this aerosol into their lungs. Bystanders can also breathe in this aerosol when the user exhales into the air.

E-cigarettes can be used to deliver marijuana and other drugs.
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:

- NICOTINE
- ULTRAFINE PARTICLES
- FLAVORING SUCH AS DIACETYL, A CHEMICAL LINKED TO A SERIOUS LUNG DISEASE
- VOLATILE ORGANIC COMPOUNDS
- HEAVY METALS SUCH AS NICKEL, TIN, AND LEAD

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.

ARE E-CIGARETTES LESS HARMFUL THAN REGULAR CIGARETTES?

E-cigarette aerosol generally contains fewer toxic chemicals than the deadly mix of 7,000 chemicals in smoke from regular cigarettes. However, e-cigarette aerosol is not harmless. It can contain harmful and potentially harmful substances, including nicotine, heavy metals like lead, volatile organic compounds, and cancer-causing agents.

YES, but that doesn’t mean e-cigarettes are safe.
WHAT ARE THE HEALTH EFFECTS OF USING E-CIGARETTES?

SCIENTISTS ARE STILL LEARNING ABOUT THE LONG-TERM HEALTH EFFECTS OF E-CIGARETTES. HERE IS WHAT WE KNOW NOW.

1. **Most e-cigarettes contain nicotine, which has known health effects**
   - Nicotine is highly addictive.
   - Nicotine is toxic to developing fetuses.
   - Nicotine can harm adolescent brain development, which continues into the early to mid-20s.
   - Nicotine is a health danger for pregnant women and their developing babies.

2. **Besides nicotine, e-cigarette aerosol can contain substances that harm the body.**
   - This includes cancer-causing chemicals and tiny particles that reach deep into lungs. However, e-cigarette aerosol generally contains fewer harmful chemicals than smoke from burned tobacco products.

3. **E-cigarettes can cause unintended injuries.**
   - Defective e-cigarette batteries have caused fires and explosions, some of which have resulted in serious injuries.
   - In addition, acute nicotine exposure can be toxic. Children and adults have been poisoned by swallowing, breathing, or absorbing e-cigarette liquid.
What is Juuling?
Electronic cigarettes (e-cigarettes) are battery-powered devices that can deliver nicotine and flavorings to the user in the form of an aerosol. E-cigarettes come in many shapes and sizes.

**WHAT'S THE BOTTOM LINE?**

A new e-cigarette shaped like a **USB** flash drive is being used by students in schools.

Nicotine is highly addictive and can **harm brain development**, which continues until about age 25.

The use of any tobacco product — including e-cigarettes—is **unsafe** for young people.

**Parents, educators, & health care providers** can help prevent and reduce the use of all tobacco products, including e-cigarettes, by young people.

>> **Learn HOW** in this fact sheet.
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.

Other devices are becoming available that look like USB flash drives. Examples include the MarkTen Elite, a nicotine delivery device, and the PAX Era, a marijuana delivery device that looks like JUUL.
E-CIGARETTE USE IS NOT SAFE FOR YOUNG PEOPLE.

E-cigarettes are unregulated tobacco products and almost all contain nicotine. Youth sometimes think they are inhaling water vapor only, which is not the case. Products appeal to youth by marketing sweet flavors like mango, fruit medley, and cool mint.

Most e-cigarettes contain nicotine, which is highly addictive and can harm brain development, which continues until about age 25.

Young people who use e-cigarettes may be more likely to go on to use regular cigarettes.
Local Data & State and Federal Regulations
The Montgomery County Department of Health & Human Services - Office of Drug and Alcohol works with community stakeholders to identify issues in order to create effective initiatives that attempt to decrease unhealthy behaviors and improve the overall health of the community. Because adolescents represent the next generation, it is important to understand how drug and alcohol use may or may not be affecting them. One tool that has been especially helpful in understanding the knowledge and behaviors relating to drug and alcohol use among youth is the Pennsylvania Youth Survey (PAYS).

The PAYS survey is conducted every other year, and it is distributed to students in the 6th, 8th, 10th, and 12th grades to assess their knowledge, attitudes, and behaviors towards alcohol, tobacco, and other drugs. Not only does PAYS gather data on the prevalence of certain behaviors, it asks questions that help guide understanding as to why these behaviors occur. It also provides statewide data so comparisons can be made from the local level to the county level to the state. In 2019, 25,644 Montgomery County students in 6th, 8th, 10th and 12th grades took the PAYS survey. The survey is anonymous, voluntary and confidential.

| Substances used by students indicating electronic vaping product use in the past year |
|---------------------------------|-----------------|-----------------|-----------------|
| Nicotine                        | County 2015     | County 2017     | County 2019     |
|                                 | 18.1%           | 31.6%           | 55.5%           |
| Marijuana or hash oil           | 12.3%           | 20%             | 37.2%           |
| Cigarettes                      | County 2015     | County 2017     | County 2019     |
| Lifetime use for all grade levels | 10.7%           | 8.3%            | 5.7%            |
| 30-day use for all grades       | 3.9%            | 2.8%            | 1.4%            |
| Vaping/E-cigarette             | County 2015     | County 2017     | County 2019     |
| 30-day use                      | 13.0%           | 15.7%           | 14.5%           |
In August of 2016, the Food and Drug Administration (FDA) established a new ruling over e-cigarettes and their liquid solutions. Because these products contain nicotine, they are now subject to the same government regulation as tobacco products. The new provision prohibits the sale of e-cigarettes to anyone under the age of 18 and requires photo identification from adult purchasers under the age of 26. Additionally, it requires producers to register with the FDA and provide a detailed account of their product ingredients as well as the manufacturing process. Likewise, producers must apply to the FDA for permission to sell their products. Before this ruling, there was no federal law prohibiting the sale of e-cigarettes to minors.

Act 112 of 2002


The Act:

- Prohibits sales of tobacco products to a minor (individual under 18 years of age).
- Prohibits the furnishing of a tobacco product to a minor (selling tobacco to a minor).
- Prohibits vending machines to be in any place where a minor can gain access without the supervision of a parent or guardian.
- Restricts displaying or offering for sale a cigarette out of a pack.
- Restricts access to tobacco products by non-employees.

The goal of this Act is to decrease access to tobacco products for youth and ultimately end illegal tobacco sales to and use by minors in Pennsylvania. In response to this Act, the Pennsylvania Department of Health conducts compliance checks at tobacco retailers across the state to make sure tobacco products are not sold to minors.

To report a youth tobacco sales violation, click here.
For Schools
The information below is a suggestion on how to strengthen your school’s ATOD policy around tobacco by officially prohibiting the possession, use and sales of vape products on school property.

Because we recognize the hazards caused by exposure to environmental tobacco smoke and vape, as well as the life-threatening diseases linked to the use of all forms of nicotine addiction, it shall be the policy of [SCHOOL DISTRICT], effective [DATE], to provide a nicotine-free environment for all students, staff, and visitors. This policy includes the smoking or vaping of any tobacco/nicotine products and the use of oral tobacco/nicotine products, and it applies to students, employees, and non-employee visitors of [SCHOOL DISTRICT].

DEFINITION

• For the purposes of this policy, tobacco shall be defined as any product containing nicotine; lighted or unlighted smoking products, vaping products or oral products.

• Tobacco shall be defined as use AND/OR possession of any smoking, vaping or oral nicotine product, included, but not limited to cigarettes, cigars, vape pens, JUUL, hookah pens, pipes, chew, spit, etc.

PUPILS

• Incidents of possession, use AND/OR sale of tobacco in violation of this policy by any students on any school property or associated property will result in [INSERT DISCIPLINARY ACTION BASED ON 1ST, 2ND AND 3RD OFFENSE].

• Tobacco Treatment Programs will be offered to violators.

EMPLOYEES

• There shall be no tobacco permitted on the property or in the vehicles of [SCHOOL DISTRICT]. This policy applies to the employees and any other persons utilizing [SCHOOL DISTRICT], property, vehicles, or equipment.

COMMUNITY/VISITORS/VOLUNTEERS

• [SCHOOL DISTRICT] prohibits tobacco use by any persons in its school buildings and on any property, buses, vans, and vehicles that are owned, leased or controlled by the school districts, including field trips, sporting events, etc.
HOW TO CREATE A SUPPORTIVE SCHOOL ENVIRONMENT

**Great American Smokeout**

The Great American Smokeout is a national quit day. Provide onsite cessation resources, and/or engage your students in supporting family members that would like to quit.

**Kick Butts Day**

Kick Butts Day empowers youth to stand up to Big Tobacco.

**World No Tobacco Day**

World No Tobacco Day is a day of policy reform, focusing on the link between tobacco use and the increased risk for diseases like heart attack and stroke. Join in by taking a field trip to Harrisburg to meet with legislators, or have students spread the word through designing a social media campaign.

If you would like to host a parent forum or student presentation at your school, please contact The Council of Southeastern PA.

**Student and Parent Presentations**

The Council of Southeastern PA
215-230-8218

Additional Resources:

[https://www.cdc.gov/tobacco/](https://www.cdc.gov/tobacco/)
[https://www.tobaccofreekids.org/](https://www.tobaccofreekids.org/)
[https://www.health.pa.gov/topics/programs/tobacco/Pages/Quitline.aspx](https://www.health.pa.gov/topics/programs/tobacco/Pages/Quitline.aspx)
**Marijuana & Youth**

Marijuana use has been linked to a range of mental health problems in teens such as depression or anxiety.

- In 2017, 17% (1 in 5) of crash victims under the age of 18 tested positive for marijuana.

**THC**

THC (delta-9-tetrahydrocannabinol) is the psychoactive ingredient in marijuana. Through botany and chemistry, potency has increased dramatically.

- THC in Dried Plant:
  - <2% in 1960s to 1980s
  - 4% in 1995
  - 17.1% in 2017

- THC in Concentrates:
  - up to 90% THC

- Students who smoke marijuana may get lower grades and be more likely to drop out of high school than their peers who do not use.

**Text QUIT to 706-222-QUIT**

Teen e-cigarette users are 3.8 times more likely to start smoking tobacco products compared to non-users.

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Vaping Related Illnesses
Are you at risk?

What is vaping and how do E-cigarettes work?
Using an e-cigarette is commonly called vaping. E-cigarettes are electronic devices that work by heating a liquid to produce a mix of small particles in the air called aerosols. The liquid can contain: nicotine, tetrahydrocannabinol (THC) and cannabinoïd (CBD) oils, and other substances.

What are in E-cigarette Aerosols?
- Nicotine
- Ultrafine particles
- Heavy metals such as nickel, tin, and lead
- Volatile organic compounds
- Cancer-causing chemicals
- Flavoring such as diacetyl, a chemical linked to lung disease

Vapes and E-Cigarettes are Associated with Severe Lung Disease

E-Cigarettes:
- JUUL
- MarkTen Elite
- PAX Era

Symptoms:
- Nausea
- Cough
- Vomiting
- Shortness of Breath
- Diarrhea
- Chest pain

Promptly seek medical attention if you have concerns about your health.

For more information contact:
Montgomery County Department of Health and Human Services
- Office of Drug & Alcohol
  - Montgomery County Department of Health and Human Services
  - Office of Drug & Alcohol
  - 610-278-3642
- Office of Public Health
  - Montgomery County Department of Health and Human Services
  - Office of Public Health
  - 610-278-5117

@HHSMontcoPA

www.quit.com

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

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 them unnoticed in schools, including in classrooms and bathrooms.

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.

**TOBACCO PRODUCT USE IN ANY FORM, INCLUDING E-CIGARETTES, IS UNSAFE FOR YOUTH.**
For school administrators and teachers looking for ways to respond to vaping disciplinary infractions, Addiction Policy Forum has developed a free educational course about the harms of vaping. Whether a student is caught vaping or in possession of a vaping product, this is an early intervention point to help educate teens about e-cigarettes and prevent substance use from progressing.

By participating in the online course “Vaping: Know the Facts for Teens” (https://addictionschool.addictionpolicy.org/), students will learn the basic brain science of addiction, how vaping affects the adolescent brain and lungs, and research that dispells common myths about vaping.

The sample letter below can assist administrators and teachers to begin the detention intervention about vaping. School officials can also send a letter and/or email notifying the student’s parent or caregiver of the infraction and a link to the course for parents on vaping. (https://addictionschool.addictionpolicy.org/)

__________________________________________________________________________________

Dear Student,

As stated in the student handbook, (name of school/county) is a Tobacco and Drug Free school. This includes vaping, or use of any e-cigarette device on school property.

In light of your recent violation of this policy, your (after-school/lunch time) detention will include completion of an online course about the health risks of vaping. The “Vaping: Know the Facts for Teens” course can be accessed at https://addictionschool.addictionpolicy.org/. Upon completion of the course, please print out the certificate and deliver it to (name and/or office) by MM/DD/YYYY.

Sincerely,

__________________________
E-cigarettes and Vaping Devices

An e-cigarette or “vape” is a battery-operated device that produces vapor instead of smoke. They have cartridges or “pods” filled with an e-liquid that contains flavorings and most often, nicotine.

These cartridges are either disposable one-time use or reusable and can be refilled manually. A battery powers the atomizer, which heats the e-liquid (stored in the cartridge) into aerosol.

There are many different kinds of E-cigarettes, including disposable e-cigarettes, rechargeable e-cigarettes (which include brands like Juul and blu), and a variety of tanks and mods.

Sources
Key Resources

- **Fact Sheet**: The most important facts about e-cigarettes and the health risks of vaping for adolescents.

- **Video: “Vaping: The Hit Your Brain Takes”**: This video explains what science says about adolescent e-cigarette use. Spoiler alert: it’s not good. As the real risks of “vaping” remain largely misunderstood by adults and teens alike, the campaign boils down the latest research.

For School Administrators and Teachers

Schools have an important role to play in helping to curb the teen vaping epidemic. The following resources can help inform the development and implementation of a school-based policy to effectively address vaping among middle and high school students through education and interventions.

- Sample Parent Advisory [PDF] [Word document]
- Detention Intervention [PDF] [Word document]
- Classroom Activity
- Online Course for Parents
- Online Course for Teens

Further Resources:

American Lung Association: The Vape Talk
Talk with your teen about e-cigarettes: A tip sheet for parents (CDC)
Teachers and Parents: That USB Stick Might be an E-cigarette (CDC)
For Parents and Caregivers

There are a number of strategies you can implement today to address vaping at home and in your community. Here are some free materials and further resources to help you get started. Educate teens on the harms of vaping and nicotine.

- **Video:** “Vaping: The Hit Your Brain Takes”

- **Fact Sheet:** The most important facts about e-cigarettes and the health risks of vaping for adolescents.

- **Online Course for Parents**

- **How Do You Really Keep Your Kids Safe From Addiction**

Further Resources:

- Talk to your teens about vaping.
  - The Vape Talk (American Lung Association)
  - E-cigarettes and Youth: What Parents Need to Know (CDC)
  - Talk with your teen about e-cigarettes: A tip sheet for parents (CDC)
  - Teachers and Parents: That USB Stick Might be an E-cigarette (CDC)
  - Juuling: What Pediatricians and Families Need to Know (American Academy of Pediatrics)
  - Parents: Facts on Teen Drug Use (NIDA)

Resources to Quit

- Tobacco Cessation Resources for Youth (American Lung Association)
- Smokefree Teen (U.S. Department of Health and Human Services)
- This is Quitting or BecomeanEx. Text “QUIT” to 202-804-9884; Text DITCHJUUL to 88709 (Truth Initiative)
- My Life My Quit: text “Start My Quit” to 855-891-9989

About Addiction Policy Forum

Addiction Policy Forum is a national nonprofit organization dedicated to eliminating addiction as a major health problem. Our headquarters are located in Washington, DC with resources and services in every state.

www.addictionpolicy.org
833-301-HELP (4357)
For Parents
10 Things Parents and Caregivers Can Do

1. Talk early and often
2. Support healthy activities
3. Set clear expectations of no use
4. Establish clear consequences
5. It's not your job to be cool
6. Do not provide alcohol or drugs to your teens
7. Pay attention
8. Make time for your child
9. Prioritize sleep
10. Intervene early

Video: How Do You Really Keep Your Kids Safe from Addiction

For more information, please go to Addiction Policy Forum.
How to Talk to
Your Kids About Vaping

This guide is intended to help you have an important talk about vaping with your kids. Sure, they may think you are uncool and annoying for bringing this up, but it is important that you do. The health risks are real and they need you to fight for them. Have The Vape Talk with your kids today.

First things first. Before you have the conversation with your kids, know the facts.

**WHAT PARENTS NEED TO KNOW**

You’ve probably heard a variety of terminology, but don’t let that confuse you. JUUL, vapes and vape pens are all forms of e-cigarettes and they’re all dangerous.

There is a misconception that vapes are just flavors and steam. Not true. Vaping is highly addictive. In fact, one JUUL pod contains as much nicotine as 20 cigarettes, or about one pack of cigarettes. Vape pods also contain toxins and carcinogens, including formaldehyde, propylene glycol and acrolein, which can cause irreversible lung damage. And because vaping is new, we’re still uncovering its long-term health effects.

All these risks are being funded by a familiar foe, Big Tobacco. Altria, the owner of Marlboro, is the primary investor in JUUL. Now these tobacco firms are targeting your kids. Parents are in the best position to protect their kids against such powerful and dangerous opponents.

**SIGNS YOUR KID MIGHT ALREADY BE VAPING**

Over 27% of high school students have used e-cigarettes in the last month, and it’s likely their parents don’t even know. Vaping is easy to hide. Unlike traditional cigarettes, e-cigarettes don’t leave the telltale scent of tobacco. But there are clues.

Look for changes in your kid’s behavior. They might start cutting back on caffeine or getting frequent nosebleeds. Also look for signs around the house. Vape pens can look like markers or USB flash drives and have disposable flavor pods, so look for discarded pods in the trash. And since vape pods come in lots of flavors, take note of any new sweet scents in their rooms or on their clothes.
TIPS FOR A HEALTHY DISCUSSION

CHOOSE THE RIGHT TIME AND PLACE
Choose a time when your kid won’t feel rushed and a place where they feel relaxed, like when you’re riding in the car or sitting at the dinner table. By choosing a place you both feel comfortable, you’ll both be more inclined to open up.

APPEAL TO THEIR GOOD JUDGEMENT
Your kid makes smart decisions every day. Resisting the temptation to vape can be one of them. Compliment their good judgement. Remind them that they are an independent thinker who doesn’t have to be influenced by peer pressure. Tell them you’re proud of their courage and principles.

ASK OPEN-ENDED QUESTIONS
Instead of asking yes or no questions, ask open-ended questions that encourage participation. If you’re genuinely curious, your kid will be less likely to get defensive.

CONVERSATION STARTERS
Here are some suggested conversation openers. Remember, don’t blow up if they share things you didn’t expect to hear. Listen to their answers, ask more questions and keep the lines of communication open.

1. Are a lot of kids vaping at your school? Are your friends vaping?
   Be sure you don’t react, just listen.

2. What do you think about vaping?
   You may hear him say, “It’s harmless – it’s just flavored water vapor,” but it’s not and you’ll share more about that next.
3. Do you know what is in JUUL pods and other vapes?
Then tell them you have been studying and here’s what you know:

- Vape pods contain harmful ingredients, including formaldehyde, propylene glycol and acrolein (ə-ˈkrō-lē-ən), which causes irreversible lung damage. It’s not just water vapor, and it’s not safe.
- Even the Surgeon General has established how dangerous vaping is. JUUL commercials and paid influencers will try to make it look safe, but it is not.
- Most vaping manufacturers, including JUUL, are owned by tobacco companies, the same companies that sell addictive cigarettes, which cause millions of deaths. These companies are now focusing their marketing efforts on replacing former cigarette customers with kids, by hooking them on e-cigarettes.

4. Do you know how vaping can damage your health?
Tell them why that matters.

- Vaping is smoking – one JUUL pod can contain as much nicotine as a pack of cigarettes.
- Once you start vaping, nicotine addiction follows – and quitting is really hard. (At this point, if you’re a smoker or former smoker, you may want to share your own experience with nicotine addiction.)
- Your lungs will suffer the effects – maybe not today, but eventually. There are multiple cases in the news of kids having seizures from e-cigarette nicotine poisoning, experiencing vaping-related lung injuries, and even death. We don’t even know yet how bad this is going to be for your health long term.

5. Do you know the other ways vaping affects your life?
Tell them why they should care.

- Over time, the chemicals in e-cigarettes will affect your attention span, memory and lungs.
- Once you’re addicted, vaping will be the boss of you. Even when you don’t want to do it, you’ll have to do it. And that’s only good for the tobacco companies.
- You’re smarter about health than previous generations were. Vaping goes against all the other healthy choices you’re already making.

ONCE IS NOT ENOUGH
Consider this an ongoing conversation. When you first bring up the subject, your kid might be caught off guard and reluctant to engage. But once you open the door to the topic, they’ll be more inclined to talk to you about it later. If your kid is still skeptical, here are some links you can suggest so they can make up their own mind.

Surgeon General: E-Cigarettes.SurgeonGeneral.gov/
CDC: CDC.gov/tobacco/basic_information/e-cigarettes/index.htm
American Lung Association: Lung.org/ecigs and Lung.org/help-teens-quit.

FOR HELP:
The American Lung Association’s Lung Helpline is staffed by registered nurses, respiratory therapists, and tobacco treatment specialists who are there to answer your questions about tobacco, including vaping, cessation. Call 1-800-LUNG-USA or visit Lung.org/helpline.
Dear Parents:

E-cigarettes or “vapes” are battery-operated devices that produce vapor instead of smoke. Instead of being packed with tobacco, they have cartridges filled with a liquid that contains flavorings and nicotine.

According to the most recent data from the Centers for Disease Control and Prevention (CDC), between 2017-2018, there was a 78 percent rise in e-cigarette use by high-school students and a 48 percent rise in use by middle-school students.

**Know the Facts**

Scientists have found harmful ingredients in vapes, including:
- ultrafine particles that can be inhaled deep into the lungs;
- flavorings that are linked to serious lung disease;
- volatile organic compounds (like benzene, which is found in car exhaust)
- and toxic metals, like nickel, tin, and lead.

Young people who vape are four times more likely to go on to smoke cigarettes than those who don’t. And Juuling delivers a great deal more nicotine than a combustible cigarette—a single Juul pod is equivalent to 20 cigarettes—which makes all of these risks even more significant.

The recent outbreak of vaping-related lung injuries across the nation led to thousands hospitalized with symptoms that include cough, shortness of breath, chest pain, nausea, vomiting, abdominal pain, diarrhea, fever, chills, and/or weight loss. As of November 13, 2019, the CDC has reported 2,051 cases of e-cigarette, or vaping, product use associated lung injury (EVALI) and 42 deaths have been confirmed.

Adolescent nicotine use can increase the risk of substance misuse and addiction, mood disorders, and permanent lowering of impulse control.
Take Action

Prevention research has shown that the rules parents and caregivers set at home about substance use has an enormous impact on whether or not teens will experiment with drugs and alcohol. Below are a few action steps you can take at home to protect your teen:

A. Talk about vaping.

The research is clear—talk early and often with your kids about the risks of using alcohol, tobacco, marijuana, and other substances to help prevent use and protect your child. This isn’t a one-time chat, but an ongoing dialogue that will change over time. Try to bring it up in casual settings where everyone can talk freely, such as during a meal, on a walk, or while in the car. Share the information above about the risks of vaping, or watch the Vaping: Know the Facts video with your teen and discuss together.

B. Set clear expectations of no use.

A key element of prevention is delaying the age of first use, especially while the adolescent brain is still developing until the age of 25. Remind your kids that you expect them not to use nicotine, alcohol or drugs, and be clear about these expectations. Don’t assume they know what you are thinking.

C. Establish clear consequences.

Be clear, consistent, and specific about what the immediate consequences of substance use are in your family. Rather than saying “you’ll be grounded” or “you’ll be in big trouble,” be specific: If you vape, then the consequence will be X for Y amount of time. On the flip side, remember to reward your child for healthy behaviors and positive decision-making.

We hope this information helps to address this issue at home and we will continue to prioritize at school to keep our students healthy and safe. If you have any questions, please let us know.

Fast Facts

1. Young people who vape are 4x more likely to go on to smoke cigarettes than those who don’t.

2. A single Juul pod is equivalent to 20 cigarettes.

3. Harmful ingredients have been found in vapes, like poisonous metals and chemicals like benzene, which is also found in car exhaust.
For Healthcare Providers
What is a JUUL?

JUUL (pronounced “jewel”) is a brand of e-cigarette made by JUUL Labs Inc.

JUUL has grown quickly in popularity since introduction to the market in 2015, fueled by a serious following among youth and young adults.

JUUL’s popularity among youth raises significant concerns for pediatric health.

JUUL Characteristics:

JUUL is a sleek, small e-cigarette that resembles a flash drive. Unlike other types of e-cigarettes, JUUL does not look like a traditional cigarette and thus may not be immediately identifiable as a vaping device. Due to their size, JUUL devices are discrete and can be easily concealed in a fist or a pocket.

JUUL operates by heating a “pod” of e-liquid containing nicotine, flavorings and other substances. When heated, the e-liquid creates an aerosol which is inhaled by the user.

JUUL has spawned its own terminology: use of these devices is called “juuling.”

Public Health Concerns:

JUUL comes in youth-friendly flavors. For decades, the tobacco industry has used flavors to attract youth to their products.¹ Youth cite flavors as a common reason for e-cigarette use.²

JUUL is highly addictive. The concentration of nicotine in JUUL is more than double the concentration found in other e-cigarettes. This high concentration is a serious concern for youth, who are already uniquely susceptible to nicotine addiction. The addictive potential is so high that the US Surgeon General has declared that youth use of nicotine in any form is unsafe.³

E-cigarette users have a significant risk of becoming cigarette smokers. Youth who use e-cigarettes are more likely to progress to smoking traditional cigarettes.³,⁴

JUULing is increasingly common in high school and college campuses. Educators report that youth are using JUUL in classrooms, hallways and restrooms, and are sharing devices with their peers. This social use encourages non-users to try JUUL, and enables students who are too young to purchase these products, or who could not otherwise afford them, to access them through peers.

References:

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.
What Are the Risks of E-cigarettes for Young People?

- The brain continues to develop through the early to mid-twenties. Because the adolescent brain is still developing, nicotine use during this critical period can disrupt the formation of brain circuits that control attention, learning, and susceptibility to addiction.
- Young people are uniquely at risk for long-term effects of exposing their developing brains to nicotine, including mood disorders and permanent lowering of impulse control.
- Nicotine activates the limbic system more strongly in the adolescent brain than in the adult brain, making addiction a greater risk for youth who use nicotine.
- E-cigarette use is strongly associated with other tobacco product use, including regular cigarettes.
- Besides nicotine, e-cigarettes can contain harmful and potentially harmful ingredients, including:
  - ultrafine particles that can be inhaled deep into the lungs
  - flavorants such as diacetyl, a chemical linked to bronchiolitis obliterans (“popcorn lung,” so identified because of the incidence of the disease in workers at plants that used flavorants containing diacetyl in microwave popcorn)
  - volatile organic compounds
  - heavy metals, including nickel, tin, chromium, and lead.
- The aerosol from e-cigarettes is not harmless, either for users or for others who are exposed to secondhand aerosol. It can contain harmful and potentially harmful ingredients, including nicotine.

Information for Educating Young Patients

As a health care provider, you have unique opportunities to reach youth and their parents with credible, correct information about e-cigarettes. The following are comments you might hear when you have a conversation with your patients about e-cigarettes, and potential responses.

Patient: My friends use e-cigarettes that don’t have any nicotine in them.

Nicotine is very common in e-cigarettes, and e-cigarettes may not be labeled to accurately show their ingredients. Nicotine is very addictive and can harm your brain.

Patient: I thought e-cigarettes were used to help people quit smoking.

The evidence isn’t clear on whether e-cigarettes help people quit smoking regular cigarettes, but we already know that e-cigarette use is a health risk for young people. For example, nicotine can harm brain development, and your brain continues developing until around age 25.
Patient: I’ve heard e-cigarettes are less harmful than regular cigarettes.

E-cigarettes don’t contain as many dangerous chemicals as regular cigarettes, but that doesn’t mean they are safe for young people to use.

- E-cigarettes can contain harmful and potentially harmful ingredients, including nicotine.
- Some of the other chemicals in e-liquids and in the aerosol from e-cigarettes are known to cause cancer in humans.
- Heavy metals such as lead and cadmium that have been found in e-cigarette aerosol can cause respiratory distress and disease.
- Some of the chemicals that flavor e-cigarettes are harmful when they are inhaled, even though they’ve been approved for ingestion. One of them, diacetyl, is used to produce a buttery flavor but has been linked to a serious and permanent lung disease called “popcorn lung.”

Patient: There’s no smoke from e-cigarettes—just harmless water vapor.

The aerosol that’s created when an e-cigarette heats up the e-liquid is not just water vapor, and is not harmless either for users or for others who are exposed to it secondhand. Besides nicotine, which is harmful to young people’s health on its own, heavy metals that can cause respiratory distress and disease have been found in e-cigarette aerosol. Chemicals that are known to cause cancer and that have been linked to lung disease can also be present in e-cigarette aerosol.
Patient: I've heard there are other risks from e-cigarettes.

- Nicotine found in many e-cigarettes is unsafe for pregnant women and fetuses. It can complicate pregnancy and cause health issues for the baby. Nicotine is known as a cause of sudden infant death syndrome.

- The liquid for e-cigarettes can contain high enough levels of nicotine to cause nicotine poisoning if it’s ingested or absorbed through the skin. It’s especially dangerous for young children, who may be attracted to the liquid because of the flavors and bright colors.

- E-cigarette batteries have been known to explode and cause burns and other injuries.

- The heating element in e-cigarettes can cause burns.

Resources

The Surgeon General’s Report on e-cigarette use among youth and young adults is a comprehensive review of existing research on this subject. The report website E-cigarettes.SurgeonGeneral.gov is a resource for both health care providers and for patients and their families.

The website contains plain-language information specifically designed to help parents and other adults educate young people on the risks of e-cigarette use. One plain-language resource available on the website is a Parent Tip Sheet.

The website also contains links to the full report, the Executive Summary, and other useful resources including videos and a fact sheet. The American Academy of Pediatrics has produced a fact sheet on the Surgeon General’s Report that is available on their website at www2.aap.org/richmondcenter/pdfs/Understanding_the_2016_SGR_Fact_Sheet.pdf.
Resources
Educational Programs

- **Stanford Tobacco Prevention Toolkit**
  - Stanford Medicine
  - [https://med.stanford.edu/tobaccopreventiontoolkit/E-Cigs.html](https://med.stanford.edu/tobaccopreventiontoolkit/E-Cigs.html)
  - 6 unit lesson plans and materials to be taught in person.

- **ASPIRE**
  - MD Anderson
  - [https://www.mdanderson.org/about-md-anderson/community-services/aspire.html](https://www.mdanderson.org/about-md-anderson/community-services/aspire.html)
  - Self paced, interactive online program.

- **CATCH My Breath Youth E-Cigarette Prevention**
  - CATCH in collaboration with UTHealth School of Public Health funded by CVS Health
  - [https://catchinfo.org/modules/e-cigarettes/](https://catchinfo.org/modules/e-cigarettes/)
  - 4 unit lesson plan to be taught in person. Grade specific versions available.

- **The Real Cost of Vaping**
  - Scholastic in partnership with FDA
  - [https://www.scholastic.com/youthvapingrisks/](https://www.scholastic.com/youthvapingrisks/)
  - 3 unit lesson to be taught in person. Grade specific versions available.

- **Smoke-Screen**
  - Collaboration between play2PREVENT lab, YALE, and USC Tobacco Centers of Regulatory Science with funding from CVS Health
  - [https://www.smokescreengame.org/](https://www.smokescreengame.org/)
  - Video game based intervention.

- **Taking Down Tobacco**
  - Campaign for Tobacco Free Kids funded by CVS Health
  - [https://www.takingdowntobacco.org/](https://www.takingdowntobacco.org/)
  - Online comprehensive youth advocacy training program.

www.SEPATobaccoFree.org
Awareness & Media Campaigns

• Behind the Haze (Philly)
  • https://www.behindthehaze.com/

• Know The Risks
  • https://e-cigarettes.surgeongeneral.gov

• Truth Campaign
  • https://www.thetruth.com

• The Real Cost
  • https://therealcost.betobaccofree.hhs.gov/
For Parents and Teens

The Surgeon General’s Report on e-cigarette use among youth and young adults is a comprehensive review of existing research on the subject. The report website is a resource for both health care providers and their families.

The website contains plain-language information specifically designed to help parents and other adults educate young people on the risks of e-cigarette use. One plain-language resource available on the website is a Parent Tip Sheet.

E-cigarettes are not approved for smoking cessation. If you are the parent of a child who is having difficulty quitting smoking, visit the Mayo Clinic webpage, which discusses how you can best work together to assist your teen in quitting.

Young Adults (13-19 years old) in the United States who want to be smoke-free can sign-up to receive text alerts using SmokefreeTXT for Teens.

For Educators

Scholastic Inc. offers a variety of worksheets and writing prompts that allow students to demonstrate their knowledge on e-cigarettes and engage in discuss about policies and scientific research surrounding their use. Visit:

Educators can access additional lesson plans to kick-start discussions about vaping with their students using these resources from the Physician Advocacy Network.

For Health Care Providers

The American Academy of Pediatrics has created a web sheet for health care providers who are looking for additional information and resources that are applicable to their patients.
**E-Cigarettes and Quitting**

E-cigarettes and vaping are often viewed as good alternatives to help quit smoking traditional cigarettes. However, studies so far have found conflicting results in regards to efficacy as a smoking cessation aid. Currently, vaping and e-cigarettes do not have FDA approval for this purpose. However, there are a variety of products on the market that have already been approved for smoking cessation including prescription and over-the-counter medications and psycho-behavioral interventions. You can also get free help quitting by calling 1-800-QUIT-NOW or by visiting [www.smokefree.gov](http://www.smokefree.gov).

**Project CONNECT®** is a nicotine cessation and reduction program that empowers adolescents to make positive choices. Utilizing the stages of change model, participants support each other through the cessation process while developing the skills for success. This innovative program can be implemented in schools and youth-serving agencies. Students meet once a week for eight weeks to discuss and work on the following topics:

- Cycle of addiction
- Health consequences of nicotine products
- Peer pressure
- Resiliency
- Goal-setting
- Stress management
- Decision making
- Social skills
- Self-image

**Project CONNECT®** Compliance Hotline: 1-855-356-8890

**Caron Connect 5**

**PA Quit Line:** Coaching available to 14 and older. Nicotine Replacement Therapy available to 18 and older.

<table>
<thead>
<tr>
<th>Tobacco Treatment Programs</th>
<th>Contact</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Abington Jefferson Hospital</td>
<td>215-481-2204</td>
<td>$25</td>
</tr>
<tr>
<td>Health Promotion Council</td>
<td>215-731-6150</td>
<td>Free</td>
</tr>
<tr>
<td>Southeastern Pennsylvania Tobacco Control Project</td>
<td><a href="mailto:tobacconcontrol@phmc.org">tobacconcontrol@phmc.org</a></td>
<td></td>
</tr>
<tr>
<td>Main Line Health – Bryn Mawr Hospital</td>
<td>484-337-5211</td>
<td>Free</td>
</tr>
<tr>
<td>Phoenixville Hospital</td>
<td>610-983-1021</td>
<td>Free</td>
</tr>
<tr>
<td>Suburban Community Hospital</td>
<td>610-270-8390</td>
<td>Free</td>
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<tr>
<td><strong>PA Quit Line</strong></td>
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<tr>
<td>For phone based quit coaching and NRT. The PA Free Quit Line is a free, evidence-based cessation service available to all Pennsylvanians.</td>
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<tr>
<td>Contact</td>
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<tr>
<td>1-800-QUIT-NOW (784-8669)</td>
<td></td>
<td>Free</td>
</tr>
<tr>
<td>1-800-DEJELO-YA (335-3569)</td>
<td></td>
<td>Free</td>
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<tr>
<td><strong>SmokeFreeTeen</strong> (Teen treatment program)</td>
<td>Text QUIT to 47848 to enroll</td>
<td>Free</td>
</tr>
<tr>
<td><strong>This is Quitting</strong> (Teen treatment program)</td>
<td>Text: “DITCHJUUL” to 88709</td>
<td>Free</td>
</tr>
</tbody>
</table>
Social media is a powerful communication tool. Use these posts for both Facebook and Twitter to help educate your followers about the use of e-cigarettes.

- E-cigarettes are known by many different names. They’re sometimes called “e-hookahs,” “mods,” “vapes,” or “tank systems.” Learn the lingo and more at [www.cdc.gov/tobacco](http://www.cdc.gov/tobacco). #ECigs #VapeAwareness
- E-cigarettes can be used to deliver marijuana and other drugs. Young people who use e-cigarettes may be more likely to smoke cigarettes in the future. Download our toolkit. #PreventionFirst #NoNicotine #ECigs [www.montcopa.org/vapingtoolkit](http://www.montcopa.org/vapingtoolkit)
- Some e-cigarettes look like regular cigarettes, cigars, or pipes. Some also resemble pens, USB sticks, and other everyday items. Find out more at [www.cdc.gov/tobacco](http://www.cdc.gov/tobacco). #Juul #ECigs #Vapes
- Most e-cigarettes contain nicotine. Nicotine can harm adolescent brain development, which continues into the early to mid-20s. Learn how to prevent the use of e-cigarettes and download our toolkit. #PreventionFirst #ECigs #NoNicotine [www.montcopa.org/vapingtoolkit](http://www.montcopa.org/vapingtoolkit).
- In #MontcoPA, cigarette use has declined from 12.6% to 8.3% amongst students in grades 6-12 from 2013-2017. However, e-cigarettes containing nicotine are on the rise by more than 13% in the last 3 years. Learn more about #MontcoPA stats. #PAYS [https://www.montcopa.org/PAYS2018](https://www.montcopa.org/PAYS2018)
- E-cigarettes vs. JUUL? JUUL is a brand of e-cigarette shaped like a USB flash drive. Like other e-cigarettes, it’s a battery-powered device that heats a nicotine-containing liquid to produce an aerosol that is inhaled. #ECigs #PreventionFirst #Juul #NoJuulsInSchools
- Set a good example by being tobacco-free. If you use tobacco, it’s never too late to quit. For free help, visit [smokefree.gov](http://smokefree.gov) or call 1-800-QUIT-NOW. #SmokeFree #QuitSmoking #NoNicotine
- Talk to your child or teen about why e-cigarettes are harmful for them. It’s never too late. Download our toolkit for tips. #PreventionFirst #VapeAwareness #SmokeFree #ChildSafety [www.montcopa.org/vapingtoolkit](http://www.montcopa.org/vapingtoolkit)
- If your child currently uses e-cigarettes, encourage him/her to learn the facts and get tips for quitting tobacco products at [Teen.smokefree.gov](http://Teen.smokefree.gov). #VapeEducation #SmokeFree #QuitSmoking
PARENTS, EDUCATORS, AND HEALTH CARE PROVIDERS CAN HELP PREVENT AND REDUCE THE USE OF E-CIGARETTES BY YOUNG PEOPLE.

PARENTS CAN:
» Learn about the different shapes and types of e-cigarettes and the risks of all forms of e-cigarette use for young people.
» Talk to their children about the risks of e-cigarette use among young people. Express firm expectations that their children remain tobacco-free.
» Set a positive example by being tobacco-free.

EDUCATORS CAN:
» Learn about the different shapes and types of e-cigarettes and the risks of all forms of e-cigarette use for young people.
» Develop, implement, and enforce tobacco-free school policies.
» Reject youth tobacco prevention programs sponsored by the tobacco industry. These programs have been found to be ineffective for preventing youth tobacco use.

PEDIATRIC HEALTH CARE PROVIDERS CAN:
» Ask about e-cigarettes, including devices shaped like USB flash drives, when screening patients for the use of any tobacco products.
» Warn patients about the risks of all forms of tobacco product use, including e-cigarettes, for young people.
For more information, contact Katie Kucz: kkucz@montcopa.org

www.montcopa.org/hhs