

Electronic Nicotine Delivery Systems Toolkit

-Not a harmless water vapor-

An educational guide of ENDS resources



Tobacco and Substance Use Prevention and Control Program

Maine Center for Disease Control and Prevention



Visit us online www.preventionforme.org

About the ENDS Toolkit

The Tobacco and Substance Use Prevention and Control Program (TSUPC) developed this toolkit to provide a consolidated resource of evidence-based electronic nicotine delivery systems (ENDS) information to help educate the public. Information about ENDS is constantly emerging and we will work to update this toolkit as additional information is published. While this document can be printed, the optimal utility of this toolkit will be on one's computer. Hyperlinks to further information have been embedded throughout the document and can be identified as the blue, underlined words. A list of the references that support the content are provided on pages 13-14.

How we talk about ENDS

Many terms are used to describe ENDS including vapes (vaping), vaporizers, vape pens, hookah pens, electronic cigarettes, e-cigarettes, electronic smoking devices, tank systems, mods, electronic vapor products, and e-pipes. Some people refer to ENDS by the brand such as JUUL or JUUL-ing. This document will use "ENDS" to refer to all of these products. It's important to note that these products do not contain or create vapor at all, so the term "vaping" is misleading. The emission from ENDS is an aerosol, which is a suspension of fine particles in a gas.

Toolkit Contents

Click on the below titles to go to the page

[Know the Facts, Page 3:](#) The basics. How ENDS work, what is in them - not a harmless water vapor.

[Youth Use, Page 4:](#) State and national data on youth use, access, concerns, action you can take.

[Adult Use, Page 5:](#) State and national data on adult use.

[Health Effects, Page 6:](#) Learn more about how ENDS can affect health.

[ENDS and Pregnancy, Page 7:](#) Health risks for pregnant women and baby, help to quit.

[State Laws/Regulations, Page 8:](#) An overview of how ENDS fit into Maine smoking laws.

[Federal Regulations, Page 9:](#) The role of the FDA in ENDS oversight.

[Tobacco Retail Sales, Page 10:](#) Definition of "tobacco retailer", including the laws they need to follow.

[School Policies and Resources, Page 11:](#) School policy samples and resources for youth/parents.

[Nicotine Addiction & Treatment, Page 12:](#) Support options for those who want to quit - phone, web, text.

[Marijuana and Vapor Use - the Laws, Page 13:](#) Marijuana law, use, and resources.

[Take Action, Page 14:](#) What you can do to help?

[References, Page 15-17:](#) References that support the information in this toolkit

Appendix

[Additional Print Materials:](#) Infographics and fact sheets.

Know the Facts

Terminology/Appearance

- Many terms are used when referencing ENDS such as: Vapes (vaping), vaporizers, vape pens, hookah pens, electronic smoking devices, electronic cigarettes (e-cigarettes, or e-cigs), tank systems, mods, e-pipes, e-hookah, electronic vapor products, and personal vaporizers.¹
- E-cigarettes can look like cigarettes, cigars, pipes, or other everyday items such as pen lighters, asthma inhalers, or flash drives.¹



Anatomy/How they work

- [Despite variations in look and terminology](#), ENDS products generally have several components that include a flow sensor, aerosol generator, battery, and solution storage.⁶
- ENDS are battery operated devices that heat a liquid into an aerosol the user inhales into their lungs, simulating smoking
- ENDS can be disposable or reusable; the reusable ENDS products have a rechargeable battery.

E-Liquid

- ENDS solution containers vary widely, from prefilled cartridges to tank-style, large refillable cartridges.
- E-cigarette aerosol isn't harmless water vapor. The aerosol contains many cancer-causing chemicals, metals, and nicotine.¹
- Nicotine content varies among products and may not deliver the content advertised on the label.
- E-cigarette devices can also be used to vape marijuana, essential oils, and other substances.

Regulations

- The Food and Drug Administration (FDA) is beginning to [regulate E-cigarettes](#).³
- E-cigarettes are not approved by the FDA as a cessation method.²
- [ENDS are noncombustible tobacco](#) products and are defined as a [tobacco product](#) in Maine.⁴

Marketing

- The [marketing](#) done by ENDS companies influences youth to use ENDS.⁵
- E-liquid comes in many colors and candy-like flavors, such as bubble-gum, gummy bear, blueberry, etc. that appeal to youth. [These](#) flavored products are reversing efforts to reduce youth tobacco use by putting a new generation of young people at risk of nicotine addiction and the serious health harms that result from tobacco use.⁷
- Companies heavily market e-cigarettes to youth in retail stores. 68% of middle and high school students were exposed to e-cigarettes advertisements in 2016.²

Youth Use

[The U.S. Surgeon General](#) stated, “e-cigarette use among U.S. youth and young adults is now a major public health concern.”¹ The Surgeon General has emphasized the importance of protecting our children from a lifetime of nicotine addiction and associated health risks by immediately addressing the epidemic of youth e-cigarette use through a recent [advisory](#).⁴

ENDS

- Are the most commonly used tobacco product by youth since 2014¹
- Pose a threat to an increasing number of Maine youth using these products.¹
- Can lead to an increase in youth smoking conventional cigarettes.¹
- Are marketed to youth. The more [exposure](#) youth have to ads, the greater chance they will try ENDS.⁵

State Level Data

- 2015 was the first year the Maine Youth Integrated Health Survey asked middle and high school students about their use of E-cigarettes. This survey is conducted every other year on the odd year.
- 15.3% (8,125) of high school students and 3.8% (1,014) of middle school students in Maine reported e-cigarette use in 2017.²
- The 2019 survey data is anticipated to be released in the fall of 2019. We will then be able to determine *current* youth ENDS use prevalence based on survey findings.

National Level Data

[Monitoring the Future Survey](#):⁶

- January 2017-January 2018, the percentage of 12th graders who reported vaping nicotine during the past 30 days nearly doubled from 11% to 21%.
- January 2017-January 2018 the percentage of 10th graders who reported vaping nicotine during the past 30 days increased from 8.2% to 16.1%.
- These are the biggest one-year increases ever seen for any substance in the 43-year history of the survey.

National Youth Tobacco Survey, 2018

- More than 3 million (20.8%) high school and 570,000 (4.9%) middle school students identified as current users of e-cigarettes in 2018 (NYTS, 2018).³

JUUL

- [A JUUL](#) is a device used among youth. It looks like a USB flash drive and is easy to hide.⁷
 - *See visual to the right.*
- The JUUL is the top-selling e-cigarette brand in the U.S.
- A single JUUL pod contains as much nicotine as a pack of 20 regular cigarettes.
- A 2018 study found nearly one-fifth of youth (ages 12-17) surveyed reported having seen JUUL used in their school.
- JUUL pods come in a variety of flavors and have interchangeable cartridges.



Youth Access

- [There are more than 460 brands](#) of ENDS, which vary in price, quality, and design.
- Youth can gain access to these devices by borrowing from peers, asking a person of legal age to purchase, taking or using from someone else, or purchasing at a store or even online. ([Internet sales are not legal in Maine.](#))⁸

Adult Use

Quick Facts

- E-cigarettes are not safe for youth, young adults, pregnant women, or adults who do not currently use tobacco products.¹
- 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.¹
- 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.¹
- If you've never smoked or used other tobacco products or e-cigarettes, don't start.¹
- Additional research can help understand long-term health effects.¹

State Level Data

- The Maine Behavioral Risk Surveillance System (BRFSS) began asking Maine adults about current e-cigarette usage in 2012, but statewide data were not available until 2015.
- 3.8% (39,923) adults in Maine reported current e-cigarette use in 2016.²

National Level Data

[BRFSS 2016](#):³

- 4.5% (10.8 million adults) use e-cigarettes in the United States.
- More than half the current e-cigarette users (51.2%) were younger than 35 years.
- The prevalence of e-cigarette use varied widely among states, with estimates ranging from 3.1% in South Dakota to 7.0% in Oklahoma.
- The prevalence of current e-cigarette use was highest among persons aged 18 to 24 years, 9.2% to 9.8% (8 million users).³

Health Effects

Research on the long-term health risks of e-cigarettes and related products is still ongoing. However, current evidence documents the presence of several dangerous chemicals in the aerosols produced by heated e-cigarettes.⁷

Studies show that some of the toxic chemicals and other substances contained in ENDS aerosols have the potential to go deep into the lungs and may pose risk for diseases not usually seen in smokers.⁷

ENDS aerosol is NOT harmless water vapor.

- Some [aerosols](#) contain propylene glycol which can cause respiratory irritation and bronchial constriction.¹ This is a concern for people with chronic obstructive pulmonary disease or asthma.
- ENDS aerosol can pose a risk for decreased lung development, breathing difficulties, lower defense against bacterial and viral pathogens, and vaping-induced inflammatory reactions that can mimic metastatic cancer.⁷
- E-cigarette aerosol contains diacetyl (an ingredient in microwave popcorn butter flavor). This chemical can cause serious and irreversible lung disease known as bronchiolitis obliterans, commonly referred to as [“Popcorn Lung.”](#)²
- [Secondhand Smoke](#) exposure to aerosolized liquid can cause harm.³

E-liquid often contain nicotine – a highly toxic and [addictive](#) substance.⁴

- Nicotine negatively affects brain development in youth.
- Nicotine use during adolescence has been associated with lasting cognitive and behavioral impairments, including effects on working memory and attention.
- Nicotine content varies among products and may not deliver the content advertised on the label.
- E-liquid can be purchased at varying levels of nicotine, ranging from 0-50 mg/mL.
- Some e-cigarettes marketed as containing zero percent nicotine may actually contain nicotine.

There are risks associated with ENDS.

- ENDS contain harmful chemicals such as formaldehyde, benzene, lead, and nickel (all cancer-causing agents).
- Nicotine poisoning can happen by swallowing the e-juice, inhaling the vapor, or absorbing the juice through skin contact. Learn more from [New England Poison Center.](#)⁵
- [ENDS](#) can explode and seriously injure people.⁶

Additional resources:

American Heart Association: [E-Cigarettes and Public Health](#)

American Lung Association: [E-Cigarettes and Lung Health](#)

Food and Drug Administration: [Understanding the Health Impact and Dangers of Smoke and 'Vapor'](#)

ENDS and Pregnancy

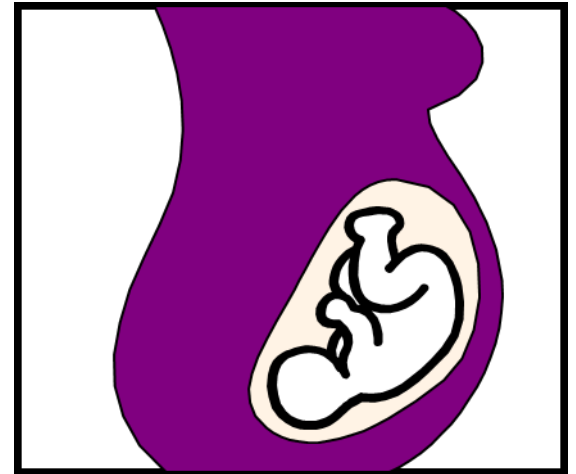
The use of ENDS during pregnancy is not a safe alternative for smoking cigarettes.¹ Aerosols produced by heated e-cigarettes contain nicotine, and other harmful additives.² Evidence identifies many health risks that adversely affect pregnant women and their fetus.

Health risks for pregnant women include^{2,3}:

- Ectopic pregnancy (a pregnancy outside of the uterus)
- Early placenta separation
- Early water breaking

Health risks for the baby include^{2,3}:

- Delayed growth
- Higher chance of being born too early
- Higher risk of stillbirth
- Smaller size at birth
- Damage the baby's brain development and lungs



Looking to quit?

Talk with your healthcare provider or call the Maine Tobacco Helpline to receive free education, and behavioral intervention, first-line treatment for pregnant women as recommended by the US Preventive Task Force.⁴

The Maine Tobacco Helpline is available for counseling and quit planning support.



State Laws

Definition

- [Maine's Retail Tobacco Sales Act](#) defines ENDS as a tobacco product whether or not they contain nicotine.
- [Maine's Public Smoking Act](#) defines ENDS use as smoking, whether or not they contain nicotine.

Use

- Smoking, which includes ENDS, is prohibited in all enclosed areas of public areas, outdoor eating areas, and all rest rooms made available to the public, [22 M.R.S. §1542](#).
- ENDS use is not allowed in public spaces including center-based or home-based day care/babysitting facilities, [22 M.R.S. §1542](#).
 - ENDS are prohibited within a private residence that is used as daycare or baby-sitting service.
 - ENDS are prohibited in outdoor areas on the property of a private residence, wherever a child under care may be present.
 - ENDS are prohibited in a motor vehicle owned or operated by the facility whenever a child under care is in the vehicle, during the facility's hours of operation.
- ENDS are not allowed in, on or within 20 feet of a state-owned beach, playground, snack bar, group picnic shelter, business facility, enclosed area, public place or restroom in a state park or state historic site, [22 M.R.S. §1580-E](#).

Sales

- A tobacco retail sales license is required to sell [ENDS](#).
- ENDS cannot be sold/distributed to persons under age 21 (unless the person has attained 18 years of age as of July 1, 2018).
- Display of prohibition of sales to juveniles required.
 - A dealer or distributor of tobacco products shall post notice of prohibiting all tobacco product sales to persons who have not attained 21 years of age. See page 10 for further details. **For free signage** [click here](#).
- Tobacco products may only be sold in a direct, face-to-face exchange
 - No internet sales on all tobacco products, which includes ENDS (except premium cigars.) [22 M.R.S. §1555-F](#).
- Nicotine liquid containers cannot be sold/distributed unless in child-resistant packaging. [22 M.R.S. § 1560-B\(2\)](#)



Federal Regulations

Federal Overview

In August 2016, the [U.S. Food & Drug Administration](#) (FDA) passed regulations that affect the manufacturing, distribution, and sales of vapor products and ENDS.¹

The FDA will:

- Review new ENDS products not yet on the market.
- Help prevent misleading claims by ENDS product manufacturers.
- Evaluate the ingredients of ENDS products and how they are made.
- Communicate the potential risk of ENDS products.
- Set standards to govern the content of tobacco products.
- Restrict vending machine sales to adult-only facilities.
- Require all tobacco products containing nicotine to have warning labels.
- Require disclosure of ingredients.

The FDA prohibits:

- Underage sales and requires retailers to verify age for over-the-counter sales. [FDA Rules for ENDS Sales.](#)
- Free samples.
- Manufacturers must provide the FDA with scientific evidence before claiming a tobacco product is less harmful.
- The FDA must review and permit the introduction of new or changed tobacco products.

The FDA and Nicotine Replacement Therapy (NRT)

- Examples of NRT are: nicotine gum, patches, and lozenges.
- ENDS are **not** approved by the FDA as NRT
- [NRT are not currently approved for people under 18 years of age.](#)²
- [The FDA advises](#) that if a person is under the age 18 and want to quit smoking, talk to a health care professional about whether you should use nicotine replacement therapies.³

[Additional FDA Resources](#)

Tobacco Retail Sales ("Tobacco 21")

Providing tobacco (including ENDS) to a person under the age of 21 is illegal.

- Maine [retail tobacco sales law](#) changed on July 1, 2018, to state that a person may not sell, furnish, or give away a tobacco product to anyone under the age of 21.

Maine's law has an exemption

- The law allows the sale of tobacco products for those who obtained 18 years of age as of July 1, 2018.
- [The City of Portland](#) adopted an ordinance that exceeds state law, which does not permit the sale of tobacco products to anyone under 21 years of age.



Definition of Tobacco Retailer

- Tobacco retailer or "[retailer](#)" means a person located within or outside the State who sells tobacco products (includes ENDS) to a person in the State for personal consumption.
- A tobacco retailer must have a license in order to sell tobacco products including tobacco accessories in Maine.

Tobacco product (includes ENDS) and accessory definition

- "[Tobacco product](#)" means any product that is made or derived from tobacco, or that contains nicotine that is intended for human consumption or is likely to be consumed whether smoked, heated, chewed, absorbed, dissolved, inhaled, or ingested.
- Tobacco products and accessories include **electronic smoking device**, cigarette, cigar, hookah, pipe tobacco, chewing tobacco, snuff or snus, rolling papers, filters, pipes, and liquids used in electronic smoking devices [whether or not they contain nicotine](#).

Retailers must verify buyers age before selling

- Tobacco products may not be sold at retail to any person who has not attained 30 years of age, unless the seller first verifies that the person's age by means of reliable photographic identification containing the person's date of birth.

Tobacco Retail Employees

- Employees must be at least 17 years of age to sell tobacco products.
- Additionally, if an employee's age is between 17 and 21, he or she may only sell tobacco products (including ENDS) in presence of supervisor at least 21 years old.
[22 M.R.S. §1555-B \(1\)](#).

School Policies and Resources

School tobacco and ENDS policies must be consistent with state and local laws. Maine School Management Association, maintains a policy template that meets State law, and includes the prohibition of electronic products. School policies can send a message to users that ENDS will not be tolerated on school grounds regardless if it is a student, teacher, other staff, or visitor.

Policies that prohibit tobacco and e-cigarette use on school property require education and access to cessation programs. Schools are allowed to exceed State law with their policy. This would include the implementation of communication and enforcement efforts, which are necessary for a policy to be effective.

Policies should:

- Educate everyone (students, visitors, and staff) about the policy.
- Post signs on school grounds indicating no tolerance.
- Create and implement an alternative to suspension strategy.
- Incorporate information on ENDS in health education classes and curriculum.

Resources for Schools

Sample policies

- Maine [Sample Tobacco School Policy](#)
 - Additional resources, such as signs, are available when utilizing Maine templates.
 - Other services available, including youth peer training and ENDS presentations.
 - For more information, please visit the community section on page 12.
- California's [Tobacco-free policies and regulations.](#)
- Public Health Law Center Kansas schools [Tobacco-free environment policy model.](#)
- Seattle Public Schools [Marijuana initiative and tobacco policy.](#)
- [10 reasons](#) to include e-cigarettes in your tobacco-free campus policy.

Youth and Parents facing materials

- E-cigarette use among youth and young adults: [A 2016 Report of the Surgeon General.](#)
- E-cigarette [U.S. CDC Fact Sheet](#) for parents, educators, and healthcare providers.
- Electronic cigarettes: "What is the bottom line" [U.S. CDC Fact Sheet.](#)
- Northern New England Poison Control Center (NNEPC), [Nicotine.](#)

Take Action

- Learn about [the different types of ENDS](#) so you can recognize them.
- Develop, implement, and enforce tobacco-free school policies and prevention programs that are free from tobacco industry influence, and address all types of tobacco products.
- Engage students in discussions about the dangers of ENDS use.

Nicotine Addiction Treatment Options

Someone under 18 years of age, who is seeking tobacco treatment help, should **talk to their health care provider to discuss the best options to quit.**

By phone: [The Maine Tobacco Helpline](#) provides a range of free tobacco treatment (cessation) services, including counseling, nicotine replacement therapy, and self-help materials to qualifying callers. Telephone quitlines have proven to be effective in helping tobacco users quit using tobacco. Call the Maine Tobacco Helpline: 1800-207-1230.



Online: Enroll for Maine Tobacco Helpline services online at thequitlink.com/



Youth and young adults:

By Text: [The Truth Initiative](#) offers free text message programs for youth and young adults who want to quit vaping or smoking. It tailors content by age group to give appropriate advice about quitting. It is also a resource for parents looking to help their children.

- Text Quit to 202-804-9884 to leave JUUL or e-cigs.
- Text QUITNOW to 202-759-6436 to quit cigarettes.

Adults:

By Web: [Become an Ex](#) provides web based support including quit plan development, texts, advice, and a supportive community of tobacco users who have quit.

Take Action for youth:

- Talk with youth about why ENDS are harmful, encourage them to quit, and share these resources.
- Be an example for youth by providing home environments that are smoke/tobacco free.
- Work to ensure school and community tobacco-free policies include ENDS and are enforced.
- [Guide: How to talk to youth about vaping](#) – Partnership for Drug-Free Kids.

Marijuana and Vapor Use – The Laws

Maine State Law

- It is illegal for anyone under 21 years of age to buy, possess, or use non-medical marijuana. [Sec.A-6 28-B MRSA](#)
- Teens can be convicted of a felony, face jail time, and be fined for selling.



Marijuana Use:

- Can lead to [addiction](#).
- May affect brain development, especially if used before a person reaches their mid-20's.
- Is linked to academic failure.¹
- Affects coordination and reaction time which causes impaired driving, a decrease in sports performance, and can increase other risk-taking behaviors.¹
- Can change brain chemistry affecting mood and motivation.
- When used regularly, is associated with higher risk of anxiety disorders, paranoia, depression and psychosis, and even increased risk of occurring suicidal thoughts.¹

Parents talk to your kids

Talk with your kids about marijuana. It can help keep them from using.

[These tips can help you get started.](#)



Learn more about vaporizing marijuana at the following resources:

- [Maine Prevention Store](#). Good to Know. <https://goodtoknowmaine.com>
- National Institute on Drug Abuse <https://www.drugabuse.gov/publications/marijuana-facts-teens/some-things-to-think-about>

Take Action

Everyone can play an important role in protecting our state's young people from the risks of ENDS.

What you can do!

- Utilize this resource to increase knowledge regarding ENDS.
- For any questions or additional support, please email dhhs.tsup@maine.gov
- Reference the Surgeon General's [Fact Sheet](#) on ENDS. ([Fact Sheet in Spanish.](#))
- Visit the Surgeon General's website on ENDS. "[Know the Risks, E-Cigarettes and Youth.](#)"
- Set a good example by being tobacco-free. If you use tobacco products, it's never too late to quit. Talk to a healthcare professional about quitting all forms of tobacco product use. For free help, visit www.thequitlink.com or call the Maine Tobacco HelpLine 1-800-207-1230.
- Take the [Smoke-Free Home Pledge](#). Be an example for youth, and create smoke/ENDS-free environments.
 - Not only are young people watching behaviors or others as an example, but they are also at risk for exposure to nicotine and other chemicals that can be harmful to their health.
- [Guide: How to talk to youth about vaping](#) – Partnership for Drug-Free Kids.
 - Talk to your child/teen about why ENDS are harmful for them. It's never too late.
 - Utilize this parent [tips sheet](#) from the Surgeon General for support. ([Parent tips sheet in Spanish.](#))
- Institute and Enforce School [Policies](#). Work to ensure schools have tobacco and smoke-free policies that include ENDS, and that the policies are enforced.
- Institute and Enforce Community [Policies](#). Work to ensure communities have tobacco and smoke-free policies that include ENDS, and that the policies are enforced.

Policy Support from a Leader in Your Community

District Tobacco Prevention Partners (DTPPs) across the State of Maine implement objectives around: prevention of youth initiation, reducing exposure to secondhand smoke, and promoting tobacco treatment through the Maine Tobacco HelpLine. DTPPs cover each community in Maine and can provide technical assistance in addressing tobacco use and exposure in key environments.

For help with your comprehensive approach to addressing ENDS, including **policy adoption and implementation**, contact your local [District Tobacco Prevention Partner](#).

References

Know the Facts

1. US CDC. (2018, November 15). Smoking & Tobacco use: About Electronic Cigarettes. Retrieved from https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html
2. Marynak K, Gentzke A, Wang TW, Neff L, King BA. (2018). Exposure to Electronic Cigarette advertising among Middle and High School students - United States, 2014-2016. *MMWR Morb. Mortality Wkly Rep* 2018, 67:294-299. Retrieved from <https://www.cdc.gov/mmwr/volumes/67/wr/mm6710a3.htm#suggestedcitation>
3. U.S. Food & Drug Administration. (2018, November 16). FDA’s Deeming Regulations for E-Cigarettes, Cigars, and All Other Tobacco Products. Retrieved from <https://www.fda.gov/TobaccoProducts/Labeling/RulesRegulationsGuidance/ucm394909.htm>
4. U.S. Food & Drug Administration (FDA). (2019, March 13). Vaporizers, E-Cigarettes, and other Electronic Nicotine Delivery Systems (ENDS). Retrieved from <https://www.fda.gov/tobaccoproducts/labeling/productsingredientscomponents/ucm456610.htm>
5. Campaign for Tobacco-Free kids. (2019, March 5). Tobacco Company Marketing to Kids. Retrieved from <https://www.tobaccofreekids.org/assets/factsheets/0008.pdf>
6. American Academy of pediatrics (AAP). (2015). Electronic Nicotine Delivery Systems, Revised e20183652 Pediatrics. *Pediatrics*, 136 (5). Retrieved from <https://pediatrics.aappublications.org/content/136/5/1018>
7. Truth Initiative. (2018, August 9). Marketing tactics e-cigarette companies use to target youth. Retrieved from <https://truthinitiative.org/news/4-marketing-tactics-e-cigarette-companies-use-target-youth>

Youth Use

1. U.S. Department of Health and Human Services (DHHS). (2016). E-Cigarette Use Among Youth and Young Adults: A Report of the Surgeon General—Executive Summary. *Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health*. Retrieved from https://e-cigarettes.surgeongeneral.gov/documents/2016_SGR_Fact_Sheet_508.pdf
2. Maine Integrated Youth Health Survey (MIYHS). 2017. Retrieved from <https://data.mainepublichealth.gov/miyhs/home>
3. Cullen KA et al. (2018). Notes from the Field: Use of Electronic Cigarettes and any tobacco product among Middle and High School students – United States, 2011-2018. *MMWR Morb Mortal Wkly Rep* 2018, 67:1276-1277. <http://dx.doi.org/10.15585/mmwr.mm6745a5>.
4. Surgeon General’s Advisory on E-cigarette use among youth. The E-cigarette Epidemic Among Youth retrieved from <https://e-cigarettes.surgeongeneral.gov/documents/surgeon-generals-advisory-on-e-cigarette-use-among-youth-2018.pdf>
5. U.S. CDC. (2018). Exposure to Electronic Cigarette Advertising Among Middle and High School Students — United States, 2014–2016. *MMWR Morb Mortal Wkly Rep* 2018, 67:294–299. DOI: <http://dx.doi.org/10.15585/mmwr.mm6710a3>

6. National Institute of Drug Abuse (NIH). (2018, December 17). Monitoring the Future Survey Results Show Alarming Rise in Teen Vaping. Retrieved from <https://www.drugabuse.gov/about-nida/noras-blog/2018/12/monitoring-future-survey-results-show-alarming-rise-in-teen-vaping>
 7. Campaign for Tobacco-Free Kids. JUUL and Youth: Rising E-Cigarette Popularity. Retrieved from <https://www.tobaccofreekids.org/assets/factsheets/0394.pdf>
 8. Maine Legislative Revised Status. (2018, December 11). Electronic Nicotine Delivery Systems. Retrieved from <http://legislature.maine.gov/legis/statutes/22/title22sec1555-B.html>
-

Adult Use

1. U. S. CDC. (2019, March 11). Electronic Cigarettes: Get the facts about Electronic Cigarettes (E-Cigarettes), their health effects and the risks of using e-cigarettes. Retrieved from https://www.cdc.gov/tobacco/basic_information/e-cigarettes/index.htm
2. Maine Behavioral Risk Factor Surveillance System (BRFSS), 2016. Data available at: <https://www.cdc.gov/brfss/brfssprevalence/index.html>
3. Annals of Internal Medicine. (2018, October 2). Prevalence and Distribution of E-cigarettes Among U.S. Adults, Behavioral Health Risk Factors Surveillance System, 2016. Retrieved from <https://annals.org/aim/article-abstract/2698112/prevalence-distribution-e-cigarette-use-among-u-s-adults-behavioral>

Health effects

1. U. S. CDC. (2018, November 15). Smoking & Tobacco use: About Electronic Cigarettes (E-Cigarettes). Retrieved from https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html
2. Popcorn Lung: A Dangerous Risk of Flavored E-Cigarettes. (2018, September 18). Retrieved from <https://www.lung.org/about-us/blog/2016/07/popcorn-lung-risk-ecigs.html>
3. American Nonsmokers' Rights Foundation. Secondhand Smoke Kills. Retrieved from <https://no-smoke.org/smokefree-threats/secondhand-smoke/>
4. National Institute on Drug Abuse (NIH). (2018, June). What are Electronic Cigarettes (E-cigarettes). Retrieved from <https://www.drugabuse.gov/publications/drugfacts/electronic-cigarettes-e-cigarettes>
5. Northern New England Poison Center. (2015, February 9). Liquid Nicotine: Dangerous to Children. Retrieved from <https://www.nnepc.org/national-news/liquid-nicotine-dangerous-to-children>
6. U. S. Food & Drug Administration (FDA). (2018, December 17). Tips to Help Avoid "Vape" Battery Explosions. Retrieved from <https://www.fda.gov/tobaccoproducts/labeling/productsingredientscomponents/ucm539362.htm>
7. US Food & Drug Administration (FDA). (2019, April 3). Understanding the Health Impact and Dangers of Smoke and 'Vapor'. Retrieved from https://www.fda.gov/NewsEvents/Newsroom/FDAVoices/ucm635162.htm?utm_campaign=04032019_Voices_Policy_Understanding%20the%20Health%20Impact%20and%20Dangers%20of%20Smoke%20and%20Vapor%27&utm_medium=email&utm_source=Eloqua

ENDS and Pregnancy

1. US Department of Health and Human Services. (2016). E-cigarette use among youth and young adults: a report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, CDC; 2016. Retrieved from https://e-cigarettes.surgeongeneral.gov/documents/2016_sgr_full_report_non-508.pdf
2. American College of Obstetricians and Gynecologists (ACOG). (2019). Tobacco and Pregnancy (Infographic). Retrieved from <https://www.acog.org/Patients/FAQs/Tobacco-and-Pregnancy-Infographic>
3. Kapaya M, D'Angelo DV, Tong VT, et al. (2019). Use of Electronic Vapor Products Before, During, and After Pregnancy Among Women with a Recent Live Birth – Oklahoma and Texas, 2015. *MMWR Morb Mortality Wkly Rep* 2019, 68:189-194. DOI: <http://dx.doi.org/10.15585/mmwr.mm6808a1>
4. US Preventive Task Force. (2015). Tobacco Smoking Cessation in Adults, Including Pregnant Women: Behavioral and Pharmacotherapy Interventions. Retrieved from <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/tobacco-use-in-adults-and-pregnant-women-counseling-and-interventions1>

Federal Regulations

1. U.S. Food & Drug Administration (FDA). (2018, November 16). FDA's Deeming Regulations for E-Cigarettes, Cigars, and All Other Tobacco Products. Retrieved from <https://www.fda.gov/TobaccoProducts/Labeling/RulesRegulationsGuidance/ucm394909.htm>
2. U.S. Food & Drug Administration (FDA). (2019, January 29). Nicotine: The Addictive Chemical in Tobacco Products. Retrieved from <https://www.fda.gov/TobaccoProducts/Labeling/ProductsIngredientsComponents/ucm629412.htm>
3. U.S. Food & Drug Administration (FDA). (2017, December 11). Want to Quit Smoking? FDA-Approved Products Can Help. Retrieved from <https://www.fda.gov/ForConsumers/ConsumerUpdates/ucm198176.htm>

Marijuana and Vapor Use

1. National Institute on Drug Abuse (NIH). (2017, December). Marijuana: Facts for Teens. Retrieved from <https://www.drugabuse.gov/publications/marijuana-facts-teens/some-things-to-think-about>

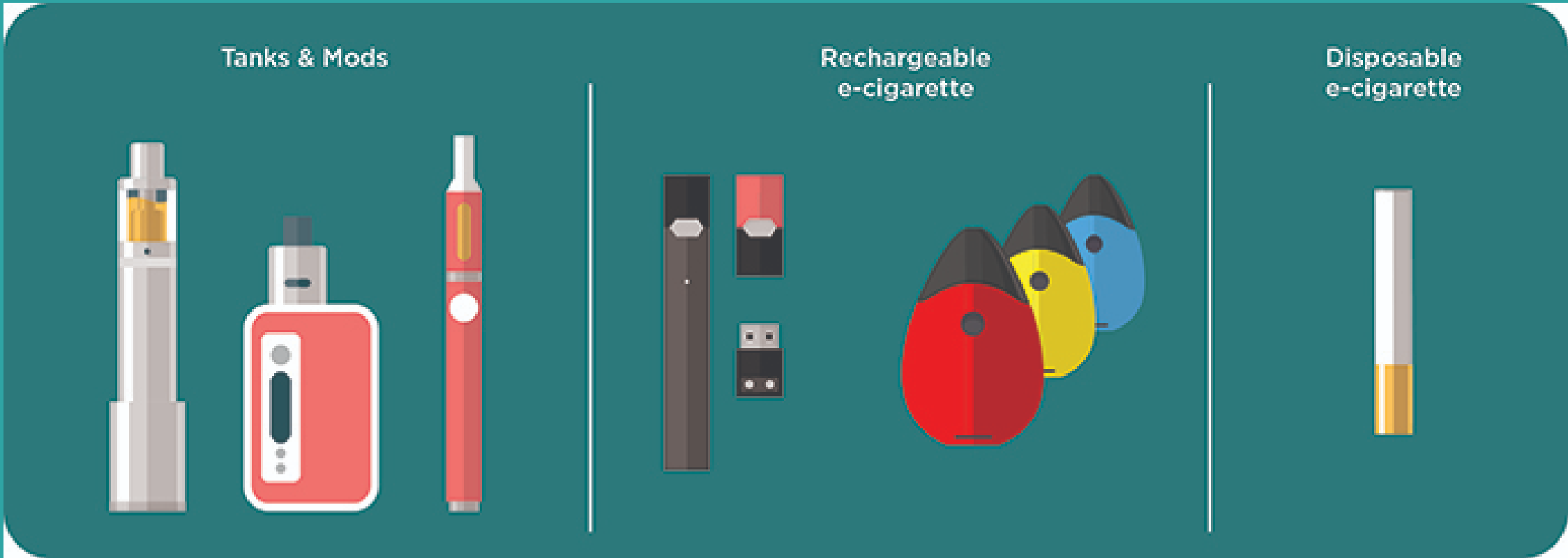
ENDS: Electronic Nicotine Delivery Systems

What are ENDS?

Electronic Nicotine Delivery Systems, or ENDS, are battery operated devices that heat a liquid, almost always containing nicotine, into an aerosol that the user inhales into their lungs, simulating smoking.

ENDS are known as:

- E-cigarettes
- Vaporizers
- Vape Pens
- E-hookahs
- E-Cigars
- Tank Systems
- Mods



Some people may also reference their ENDS use by the brand, such as, JUUL or JUUL-ing or refer to their use as vaping.



"Harmless Water Vapor"



ENDS are defined as a tobacco product in Maine therefore, included in tobacco policies.



In 2017, one in three Maine High School students reported having ever used an electronic vapor product.



National data from 2018 demonstrated a 78% increase in recent use of ENDS devices by high school students.

A Comprehensive Approach to Addressing ENDS

Combined, these steps are intended to prevent further youth from initiating use of electronic products and better arm schools with the tools they need to educate their staff and students, and address violations.



Update Tobacco Policy



Educate parents, students and staff



Incorporate into Health education curriculum



Treatment Resources



Youth engagement and empowerment

1) **Update tobacco policy** (ADC and ADC-R) to include the prohibition of all tobacco products, including the prohibition of electronic products such as JUUL.

2) **Educate parents, students and staff** about electronic products, including the dangers of vaping.

3) **Incorporate information** on electronic products into **health education classes and curriculum**.

4) **Treatment resources** - help appropriate school personnel, such as nurses and substance abuse counselors, understand available treatment resources.

5) Provide **youth engagement and empowerment** training and opportunities.

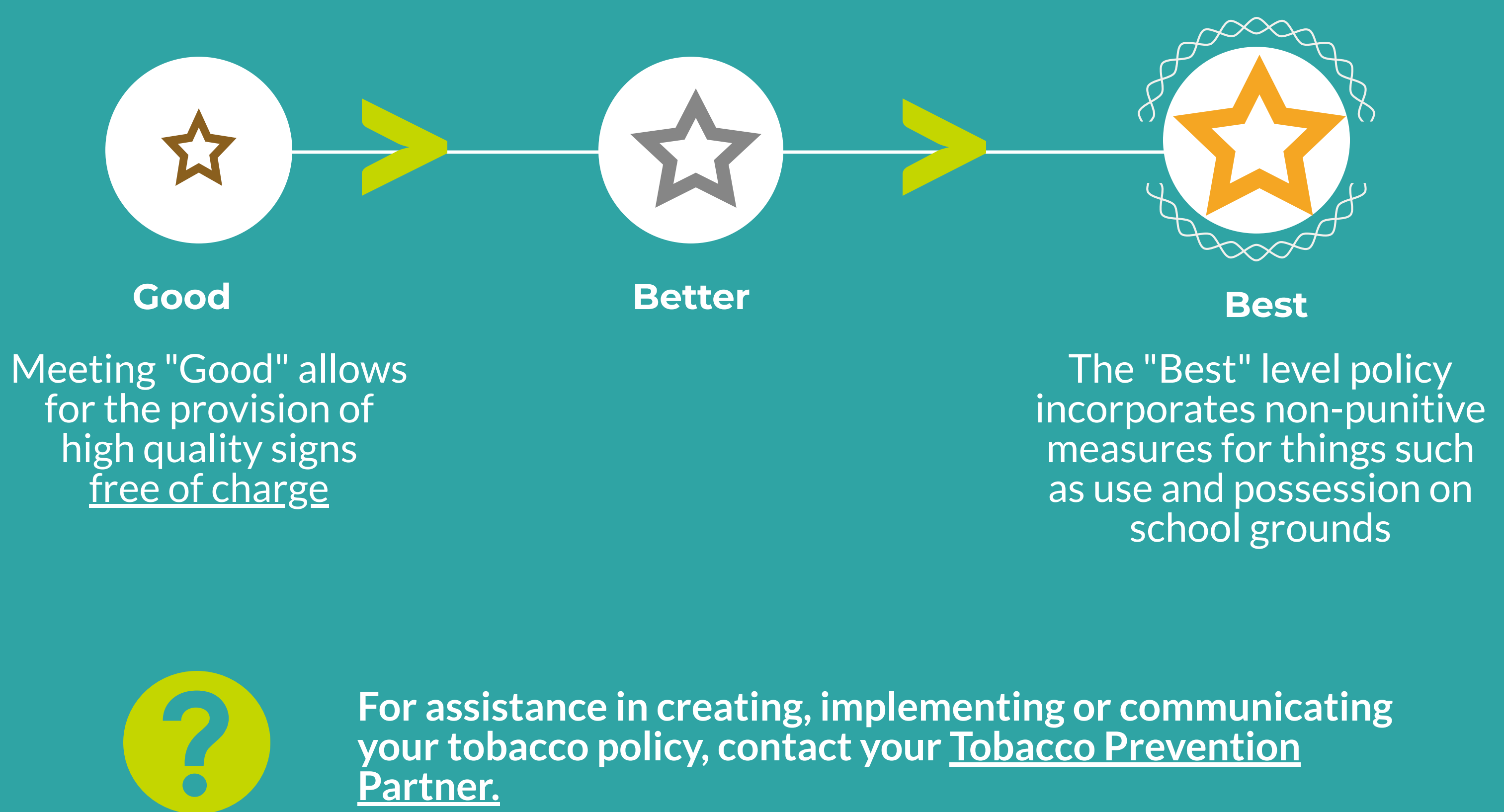
For help with your comprehensive approach to addressing ENDS, contact your local District Tobacco Prevention Partner.



Model Tobacco Policy as a Foundation

Policy Framework

- Maine School Management Association, MSMA, maintains a policy template that meets State law, and includes the prohibition of electronic products.
- The MaineHealth Center for Tobacco Independence maintains different levels of policies rating along a spectrum of "Good/Better/Best" in terms of comprehensiveness.
- Schools are allowed to exceed State law with their policy. This would include the implementation of communication and enforcement efforts, which are necessary for a policy to be effective.



Maine's Tobacco 21 Law

Purchasing

In 2017, the Legislature passed a law that allowed Maine to become the fourth State to increase the age to purchase tobacco products to 21 - though it included a grandfathering clause to consider individuals who were 18 at the time the law became active (July 1, 2018).

18 → 21



Evidence-based strategy to decrease youth initiation.

Possession

Increasing the legal age to purchase tobacco products is an evidence based strategy to decrease youth initiation.

Removing penalties associated with youth possession is also an evidence based strategy to focus punitive aspects on those who provide youth with the products.



No punitive penalties for youth possession of tobacco products



Evidence-based strategy to decrease youth initiation.

For more information on the law as well as how it affects schools, please see the following resources:

- Campaign for Tobacco-Free Kids
- CTI T21 for Schools

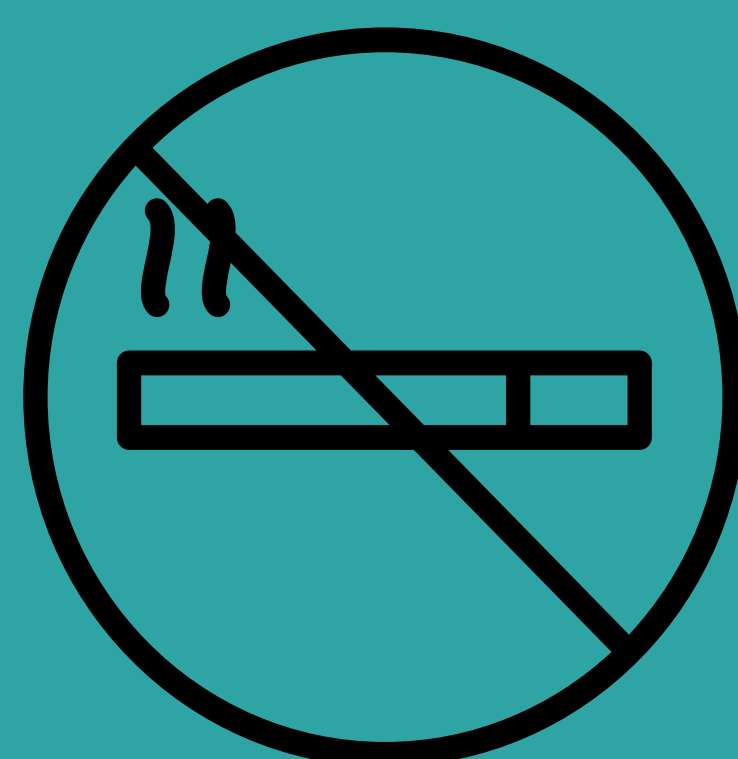
Addressing Youth Possession

Recently there has been a significant focus on how Maine's Tobacco 21 law has affected school's enforcement capacity for student possession and use.

Namely, the law removed the capacity of law enforcement to file a civil violation against a student for possessing tobacco products on school grounds. The evidence-based framework of T21 sought to penalize those who sell/ provide tobacco products to underage youth - and decrease access.

The absence of civil violation does not limit what schools can do with the policies that they set. School policy can exceed State law and districts can develop and implement measures that go beyond what is currently allowed under law.

For example, schools could choose to prohibit possession by all students regardless of age.



Prevention Resources - ENDS

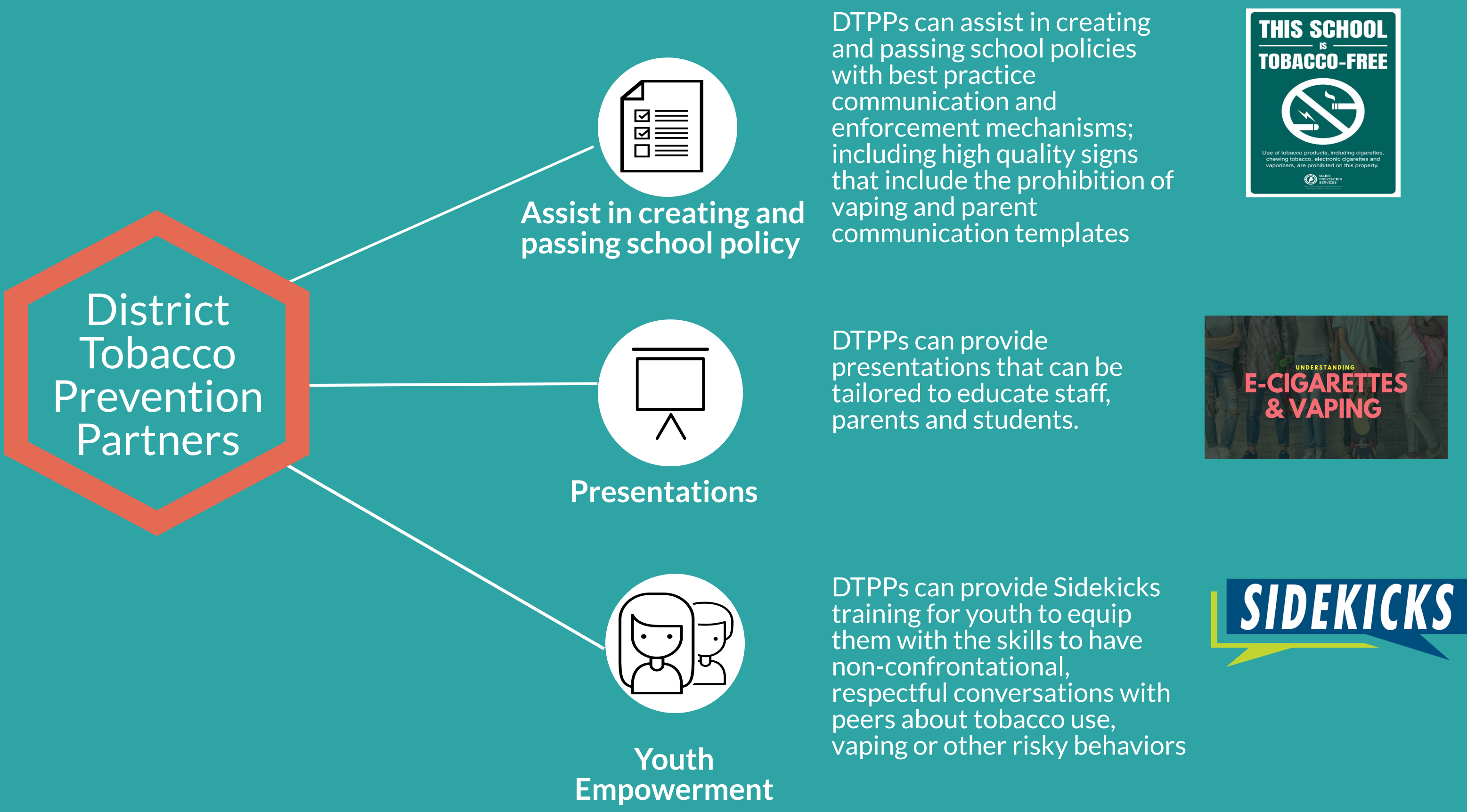
Maine-based Resources

District Tobacco Prevention Partners (DTPPs)

Through the Maine Prevention Services initiative, the Maine CDC funds local level tobacco prevention efforts to support schools in making/ adopting steps of the comprehensive approach to addressing ENDS.

To connect with a tobacco prevention partner in your area, you can:

- email us at tobaccopreventionservices@mainehealth.org
- or
- locate them here: <https://ctimaine.org/dtpp>



National Resources

There are many great resources available nationally, including some that are geared towards health education and curriculum needs.

The following websites are great places to start for prevention purposes:

- | | |
|--|--|
|  Surgeon General's Report on ENDS |  Stanford Curriculum |
|  FDA Real Cost Campaign |  CATCH |
|  Know the Risks | |

Partners for Drug Free Kids has a comprehensive [Vaping Guide for Parents](#)

More Resources to Come

We want to acknowledge there are still many unmet needs for schools to adequately address e-cigarette use within their student population, and are committed to learning more about what is needed before further resources are developed.

In late Spring, the Maine CDC and MaineHealth Center for Tobacco Independence will be hosting forums across the State to solicit school and community input on additional resource needs.

Additionally, information can be provided through email and will be consolidated into findings from the forums. For more information, contact us at Tobaccopreventionservices@mainehealth.org

Treatment Resources - ENDS

Maine-based Resources

The Maine Tobacco Helpline
1-800-207-1230



Free telephonic counseling service



Supports youth and adult tobacco product users with evidence-based treatment



Nationally Certified Counselors

The Maine Tobacco Helpline is a free, telephonic counseling service for people looking to become tobacco and nicotine-free. The helpline can also be a resource for school personnel such as school nurses who may be looking for support for students interested in quitting.

To connect with the Maine Tobacco Helpline online, visit TheQuitLink.com. This website contains data, resources, facts about tobacco use, a click-to-call option and online enrollment opportunities for the Maine Tobacco Helpline.



National Resources



The Truth Initiative supports innovative and free text message programs, and tailors content by age group to give teens and young adults appropriate recommendations about quitting.

It also serves as a resource for parents looking to help their children who now vape.

Available Resources



To access the new e-cigarette quit program, users can text "QUIT" to (202) 804-9884



This is Quitting-Text to Quit



BecomeAnEx

More Resources to Come

We want to acknowledge there are still many unmet needs for schools to adequately address e-cigarette use within their student population, and are committed to learning more about what is needed before further resources are developed.

In late Spring 2019, the Maine CDC and MaineHealth Center for Tobacco Independence will be hosting forums across the State to solicit school and community input on additional resource needs.

Additionally, information can be provided through email and will be consolidated into findings from the forums. For more information, contact us at Tobaccopreventionservices@mainehealth.org

For more information and other ENDS resources, visit: www.ctimaine.org/resources



MAINE
PREVENTION
SERVICES

Maine Center for Disease Control & Prevention
Department of Health and Human Services

E-CIGARETTES

These battery powered products heat a liquid that contains nicotine and other chemicals.



E-Cigarettes are also known as **Electronic Nicotine Delivery Systems (ENDS)**. Other types of ENDS can include vaporizers, vape pens, hookah pens and e-pipes.



The **long term health effects** of these products are not known.



ENDS are made to **look like cigarettes**, cigars, pipes, pens and flashlights.



Nicotine liquids for ENDS are **flavored**, which may increase use by youth.



Nicotine is **addictive** in any form and **poisonous** in high doses.



The vapor can release nicotine and **cancer causing chemicals**.

ENDS are NOT APPROVED as a quit aid by the U.S. Food & Drug Administration (FDA).

BREATHE EASY

REDUCING SMOKE EXPOSURE IN MAINE



**MAINE
PREVENTION
SERVICES**

Maine Center for Disease Control & Prevention
Department of Health and Human Services

Learn more at: BreatheEasyMaine.org