

Report to the Boards of Health

Jennifer Morse, MD, MPH, FAAFP, Medical Director

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Vaping and Severe Pulmonary Disease Associated with Vaping

As of September 19, 2019, there have been 530 confirmed and probable cases of severe pulmonary disease related to e-cigarette use, or vaping, reported in 38 states and one U.S. Territory, including 7 deaths in California, Illinois, Indiana, Kansas, Minnesota, and Oregon. This is an increase from 380 cases in 36 states and 1 territory and 6 deaths just one week prior. Of the cases where information is available, 72% are male, 67% are 18 to 34 years old, 16% are under 18 years and 17% are 35 years or older. These cases were first noted in June 2019. As of September 19, 2019, 12 cases have been identified in Michigan and 14 possible cases are under investigation. The first case in Michigan was reported in early August.

Patients have reported symptoms such as: cough, shortness of breath, chest pain, nausea, fatigue, fever, vomiting, diarrhea or abdominal pain. Some patients have reported that their symptoms developed over a few days, while others their symptoms developed over several weeks. One of the largest review of cases looked at 53 cases from Wisconsin and Indiana. It was found that most of those affected were teens and young adults that had previously been healthy, though 30% did have a history of asthma. All had used e-cigarettes or similar products within the 90 days before symptoms started, and nearly all last vaped within a week prior. Daily use was reported by 88%. The majority (80%) reported using only a marijuana extract, or THC, some reported using both THC- and nicotine-containing products, and 17% reported using nicotine only. The FDA has tested numerous samples and no one substance has been identified in all of the samples tested.

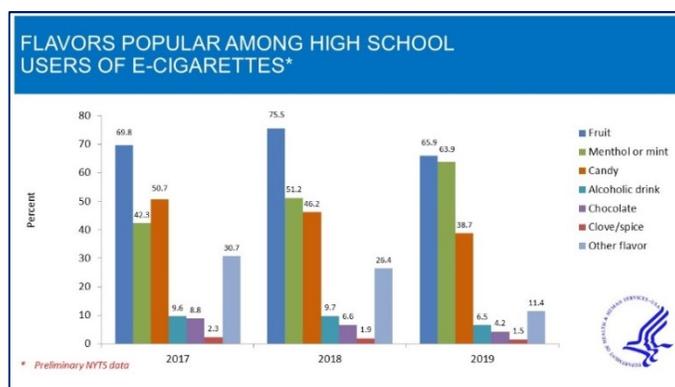
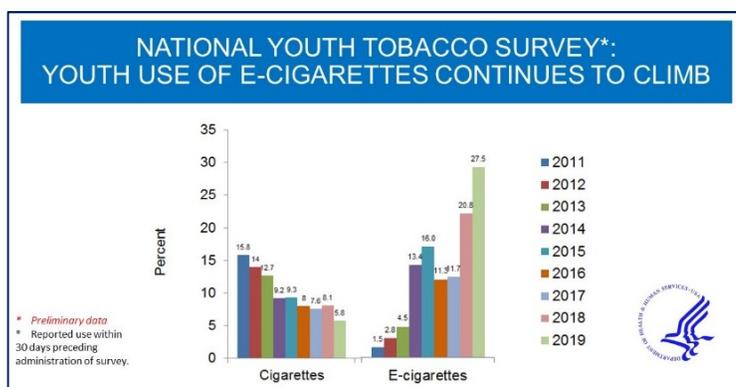
Last year, the U.S. Surgeon General declared an epidemic in youth e-cigarette use. Since 2014, e-cigarettes have been the most commonly used tobacco product among youth in the U.S. E-cigarette use among middle and high school students increased 900% from 2011-2015. From 2017 to 2018, e-cigarette use among youth increased 78% among high school students and 48% among middle school students. Of the youth using e-cigarettes, 30% have vaped marijuana at some point. In Michigan, 39 counties reporting on high school student e-cigarette use over the last month showed an increase between 30% and 118% from 2015-2016 and 2017-2018.

In a recent study, 81% of youth e-cigarette users reported choosing a flavored product at their first use. This study concluded that: availability of flavors was a more important factor for e-cigarette use among adolescent and young adult users than for older adult users; adolescent young adult users were more likely to use fruit- and candy-flavored e-cigarettes than were older adult users; older adult users and cigarette smokers were more likely to use tobacco- or other-flavored e-cigarettes than were adolescent and young adult users and nonsmokers, and; adolescent and young adult users were more likely to use multiple flavor types than were older adult users. This study also concluded that stricter regulation or banning of sweet e-cigarette flavors, while continuing to allow sales of tobacco and mint/menthol flavors, could help to reduce e-cigarette use among young persons while not being a burden to older adult e-cigarette users trying to quit smoking.

Recently, under the order of Governor Whitmer, the Michigan Department of Health and Human Services (MDHHS) issued an emergency rule to ban the sale of flavored nicotine vaping products in retail stores and online, as well as ban misleading marketing of vaping products, including the use of terms like “clean,” “safe,” and “healthy” that perpetuate beliefs that these products are harmless. The governor also ordered the Michigan Department of Transportation to enforce an existing statute to prohibit the advertising of vapor products on billboards. The U.S. Food and Drug Administration (FDA) announced they are also working on plans to ban flavored e-cigarette products.

Prior to 2009, flavored cigarettes were available, and, like flavored e-cigarettes, the majority of smokers reported that the first product they tried was a flavored variety. Sweet flavors were very attractive to young smokers, as they masked the unpleasant tobacco flavor and increased the appeal to smoking. Flavored products were most heavily marketed to younger smokers, particularly adolescents, similar to the pattern we see with e-cigarettes today. Three times as many 17 years olds (22.8%) reported using flavored cigarettes compared to smokers over 25 years (6.7%). In order to address youth tobacco use, flavored cigarettes were banned by the FDA in 2009 as part of the Family Smoking Prevention and Tobacco Control Act. Follow up studies suggested that this ban on flavored cigarettes was successful in curbing adolescent tobacco use. Likelihood of teens being a smoker decreased 17.1% and teen smokers smoked 59% fewer cigarettes per month. There was a 45% increase in smokers that used menthol cigarettes, however. The reductions in youth smoking after banning flavored cigarettes seem to support the decisions to ban flavored e-cigarette products.

Vaping THC extract has been associated with the majority of the severe pulmonary disease related to e-cigarette use. The THC vape oils and cartridges are typically made in unregulated facilities with a variety of different additives and contaminants. THC concentrations of vaporized hash oil and waxes can exceed that of dried cannabis by four to thirty times. Using these high concentration TCH products by vaping can cause drug concentrations to move to the brain faster and at higher levels which can result in an increase in compulsive and addictive behaviors. Vaping cannabis and THC produces less odor and smoke, allowing users to discretely vape in public places, including school.



From: <https://www.fda.gov/news-events/press-announcements/trump-administration-combating-epidemic-youth-e-cigarette-use-plan-clear-market-unauthorized-non>

Resources:

- www.michigan.gov/e-cigarettes
- www.cdc.gov/tobacco/basic_information/e-cigarettes/

Recommendations

- Educate youth and adults about the harms of e-cigarette and nicotine use.
- Incorporate e-cigarettes into smoke-free policies and encourage local businesses and schools to do the same.
- Refer those struggling with tobacco or e-cigarette use to help:
 - For users younger than 18:
 - My Life, My Quit:** at <https://mylifemyquit.com/> or text "Start My Quit" to 855-891-9989.
 - Smokefree Teen:** at www.teen.smokefree.gov or text "QUIT" to iQuit (47848).
 - Free Truth Initiative quit programs:** [This is Quitting](#) or [BecomeAnEx](#). Users can text "QUIT" to 202-804-9884.
 - Smoking Stinks:** at <https://smokingstinks.org/>.

b. For users 18 and older:

- i. **Michigan Tobacco Quitline:** at <https://michigan.quitlogix.org/en-US/> or call 1-800-QUIT-NOW (784-8669).

References

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