

Report and Recommendations from the
Oak Park Board of Health Commission
The Use of E-Cigarettes Among Youth

Background:

The Village of Oak Park Ordinance 8-6-1 (Comprehensive Regulation of Tobacco Products) was amended in August 2016. The amendment increased the age of sales for tobacco and nicotine products to age 21 (8-6-6), included E-Cigarettes in the definition of Tobacco Products (8-6-1) and addressed purchasing and possession of tobacco products by minors, as well as changing signage and licensing of tobacco vendors.

Tobacco smoking is the most preventable cause of morbidity and mortality. The use of E-Cigarettes is seen as a viable alternative to cigarette smoking for adults who have developed a dependency on tobacco / nicotine products. In 2016 the prevalence of E-cigarette use among youth was in the early stages of study. Since then there has been a growing body of research that shows an alarming increase in the number of youth using electronic nicotine delivery systems. In a 2017 study by the CDC, about fifty per cent more high school and middle school students' vape than smoke (1).

Agenda Item Summary

At the May 7th Village Board meeting, a referral was made to the Board of Health to review the issue of increased use of E-Cigarette among youth in the Village. The Board was asked to focus on regulations, education and treatment.

Review of Data

The dangers of vaping are still being studied. The facts however are:

1. The devices (Juul brand is over 60% of the market) can be purchased either in a brick and mortar establishment or online. Kits cost \$35, pod packs cost \$16 and up dependent on where they are purchased. Thumbnail sized cartridges (pods) contain "juice" equivalent to a cigarette packs worth of nicotine. There are 4 Juul pods in a pack. The juice is available in concentrations of 3% or 5% nicotine by volume. Juice flavors include classic tobacco, Virginia tobacco, mint, mango, cucumber, menthol, fruit and crème (2). Other brands that sell Juul compatible pods come in additional flavors like blueberry, watermelon, strawberry, etc. Unfortunately purchase of non-Juul brands do not guarantee what addition additives may be in the juice.

2. There is evidence that e-cigarette use is associated with increased heart rate and diastolic blood pressure immediately following use; and increased coughing, wheezing, and asthma exacerbation in youth (3). The incidence of asthma within the Oak Park /River Forest community was identified as an indicator in the 2017 Comprehensive Community Needs Assessment.

Although the effects of long-term use of e-cigarettes are not known, there is substantial evidence that chemicals in e-cigarette aerosols can cause acute endothelial cell dysfunction, oxidative stress, and DNA damage and mutagenesis, making it scientifically possible that long-term use could increase risk for tissue damage and cancer. Although they produce less harmful constituents than combustible cigarettes, there is evidence that e-cigarette aerosols contain toxic substances including carbonyl compounds, volatile organic compounds and carcinogens such as formaldehyde. They also contain addictive levels of nicotine. Inhaling the contents of one pod is the equivalent of smoking an entire pack of cigarettes (4).

3. The nicotine in tobacco binds to receptors in multiple regions of the brain, raising dopamine levels and mimicking a key neurotransmitter that affects focus and arousal. The younger the brain, the more easily its reward circuits can be manipulated. Exposure to nicotine during adolescence has lasting negative impacts on brain development, affecting addiction, cognition, neural connectivity, and behavioral health. Adolescents can become dependent upon nicotine very soon after starting use. According to the U.S. Surgeon General, "the use of products containing nicotine in any form among youth, including in e-cigarettes, is unsafe". Youth who begin with e-cigarettes are more likely to transition to combustible tobacco cigarette use and become smokers who may be at risk to suffer the known health burdens of combustible tobacco cigarettes. Moreover, although infrequent, e-cigarettes can explode, leading to burns and other injuries, and consumption of or dermal exposure to e-liquids is dangerous, even fatal (5).
4. Despite steep declines in cigarette use, youth use of other tobacco products in the United States has risen. For example, the use of e-cigarettes among high school students increased from 1.5% in 2011 to 11.3% in 2016. Among youth that currently use e-cigarettes, 71.2% started with a flavored product. Research shows that teens that have tried flavored tobacco products even once are 170% more likely to be current smokers than those who have never tried flavored tobacco products. Researches done by tobacco companies reveal that younger users prefer flavored, smokeless tobacco products (4).
5. Approximately 73% of youth believe e-cigarettes are less harmful than cigarettes and 47.1 % believe that they are less addictive. Youth and young adult use of e-cigarettes is associated with an increased risk of progressing to cigarette smoking. Studies have shown that youth are especially vulnerable to marketing for tobacco products, and that exposure to marketing leads to higher initiation rates. E-cigarette marketing includes a variety of messages to make the products more appealing, including messages that they are safer, healthier, an alternative to smoking cigarettes or a "new" way to smoke, and that they can be used places where smoking is prohibited. A 2018 study in the Journal of Pediatrics found that 51.8% of 12th graders that used e-cigarettes believed that the vapor contained only flavorings and only 11.1% believed it contained nicotine and 60% of teens believe that their use causes little or only some harm as long as they aren't used daily. The same study found that many youth tobacco users do not realize they are using nicotine products at all. (6)
6. Many people believe that e-cigarettes are safe. The inhaled aerosols of e-cigarettes contain numerous potential toxicities, some of which could be dangerous for health with long-term use. The safety of prolonged aerosol exposure is not known. The use of e-cigarettes as a harm-reduction tool at stopping tobacco smoking is not uniformly successful. E-cigarettes may be safer than tobacco products, but repeated prolonged exposure to their aerosols has its own considerable potential risk. The long-term health consequences of their use remain to be established. (5)

Recommendations:

Regulations related to businesses under current ordinance

- a.** Reinforce with business owners who sell electronic nicotine delivery systems- ENDS (see Attachment 1) the current Tobacco 21 ordinance through Village communication venues and at Business Owners Meetings. Additional health related information can be provided by the Public Health Department and the Board of Health. Additional funding can support quarterly in-person educational workshops.
- b.** Reinforce with retail business owners the need to display signage that advises customers of Tobacco 21 ordinance requirements including no selling vaping devices to anyone under 21. Consider adding verbiage to signs be expanded from the word “tobacco” to the sale of nicotine and add statements on the health impacts for youth.
- c.** Send communication (written and electronic) to retailers with warnings of penalties of selling tobacco and nicotine products to persons under the age of 21.

Additional recommendations that might require amending current ordinance

- a.** Restrict the placement of ENDS materials to area accessible to employees only.
- b.** ENDS liquid has been marketed in packaging resembling juice boxes or candy. The FDA recently sent out warning letters to e-cigarette manufacturers requesting that they do more to restrict the sales of flavored e-cigarette products to youth and other underage users. Impose additional fines on business owners who continue to sell restricted packaging.
- c.** Ban the sale of ENDS pods containing juice flavors other than tobacco.
- d.** Restrict sale of nicotine concentration in pods to 3% by volume.
- e.** Restrict the sale of ENDS pods to those that are non-refillable.
- f.** Restrict distribution of any free samples of ENDS materials.
- g.** Eliminate the sale of “skins” used to decorate the ENDS devices.
- h.** Amend current ordinance to place a restriction on marketing materials for ENDS materials focused on adolescents and young adults under 21. Any materials must be focused on adult use for decreasing cigarette use. Marketing materials are limited to interior walls behind sales counter. There shall be no marketing materials on windows or doors.
- i.** Review the location of retail vendors that sell ENDS products in proximity of all schools. Restrict sales of ENDS by businesses within 500 feet of all schools.
- j.** Increase tax on ENDS up to 40% of price of product. (7).
- k.** Review current license fees for retailers who sell tobacco and nicotine products. Increase the license fees.
- l.** Increase Compliance Checks on businesses that sell ENDS materials. Investigate if Compliance Check support can be given by Cook County Sherriff.
- m.** Investigate sources of funding for increased vendor compliance checks including revenue from increasing license fees and product tax. Example – from the Juul website “We have reseller terms that include monitoring and penalties for noncompliance with underage restrictions. We have pledged an initial investment of \$30M over the next three years dedicated to independent research, youth and parent education, and community engagement. Because of the regulated nature of our product, we conduct random compliance checks of independent retail stores using our secret shopping program. We evaluate hundreds of locations every month.”
- n.** Require all online or mail deliveries of ENDS be to residents over 21. (8)
- o.** Liquid from pods may be considered hazardous material. Amend ordinance to include safe handling and disposal of empty and broken pods.

Education:

- a. Use Village communication venues to highlight the problem of e-cigarette use among youth. Develop a mechanism to solicit recommendations from residents to assist in addressing the problem.
- b. Reach out through Village and Health Department communications to health care providers, dentists and clinics in Oak Park with educational information regarding vaping and the rise in ENDS use among youth.
- c. Utilize School Resource Officers who have authority under Section 8-6-7 to "Any law enforcement officer who finds a person under the age of twenty one (21) years of age to be in possession of a tobacco product is authorized to seize and destroy the tobacco product." (Ordinance. 16-054, 6-6-2016, eff. 8-1-2016). SRO's can increase awareness among youth and parents about use of ENDS materials through use of reliable validated materials such as the Stanford University Tobacco Prevention Toolkit (9). This should include signs of nicotine poisoning and how to respond if pod liquids contaminate skin or clothing.
- d. Partner with other agencies to assess the prevalence of ENDS use in middle and high school youth. Review the data from the IYS related to ENDS to determine trends and identify problem areas.
- e. Investigate partnership with public and private educational institutions, parent and youth organizations that are addressing this issue. This might include development of joint social media campaigns. Determine what initiatives the Village is able to support. Investigate what has already been done by community organizations to address ENDS use among youth.
- f. Partner to provide education for parents on social media related to ENDS, how to identify if your youth is using devices, how to recognize and manage online purchases using prepaid debt cards etc. Many youth do not recognize the presence of nicotine in ENDS products and also do not recognize signs of addiction.

Treatment

- a. Publicize Illinois Quitline information to assist youth in decreasing or stopping use of electronic nicotine delivery systems.
- b. Promote current community resources that address ENDS use through Village communication venues.

Respectfully submitted by,

Florence Miller

Florence Miller, Chair
Oak Park Board of Health Commissioners

References:

1. https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html
2. <https://www.juul.com/shop/pods>
3. The Promise of Vaping and the Rise of Juul. Article in The New Yorker
<https://www.newyorker.com/magazine/2018/05/14/the-promise-of-vaping-and-the-rise-of-juul>
4. The Juul is too cool. Article in New York Times.
<https://www.nytimes.com/2018/04/07/style/the-juul-is-too-cool.html>
5. Gulay Tegin, MD; Hema Madhuri Mekala, MD; Simrat Kaur Sarai, MD; Steven Lippmann, MD. South Med J. 2018;111(1):35-38.
6. Electronic Nicotine Delivery Systems. <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Richmond-Center/Pages/Electronic-Nicotine-Delivery-Systems.aspx>
7. State of Pennsylvania 2016 Omnibus Bill- ARTICLE XII-A TOBACCO PRODUCTS TAX
<https://www.legis.state.pa.us/cfdocs/legis/home/docHits.cfm?DocId=65906&Index=D%3a%5cProgram%20Files%20%28x86%29%5cdtSearch%20Developer%5cUserdata%5cuncons&HitCount=20&hits=b2+b3+111+112+25f+260+3c7+3c8+3e7+3e8+400+401+438+439+449+44a+465+466+473+474+>
8. 2017 Hawaii House Bill 1895-. SECTION 5. Chapter 245, Hawaii Revised Statutes – see Attachment 2
9. Stanford University Tobacco Prevention Toolkit
<https://med.stanford.edu/tobaccopreventiontoolkit/E-Cigs.html>

Attachment 1

Stores selling the Juul Product in Oak Park and surrounding suburbs
From Juul website - <https://www.juul.com/locator>

Oak Park

Circle K

7-Eleven – 3 addresses listed

Seven Point

Cignot

Walgreens ?

Forest Park

7-Eleven – 2 addresses listed

Famous Liquors 2

Cardinal Liquors

Berwyn

Perfect Shell

Circle K – 2 addresses listed

7-Eleven – 3 addresses listed

Cicero

Best Value Liquor

Perfect Shell

7- Eleven – 2 addresses listed

River Forest

7-Eleven

Circle K

Tobacco Retailers List

Business Name	Address
7-Eleven	661 South Blvd
7-Eleven	240 Chicago Ave
7-Eleven	515 Madison St
BP Gas Station	6119 North Ave
BP Gas Station	727 N Harlem Ave
BP Gas Station	100 Chicago Ave
BP Gas Station	300 Lake St
BP Gas	7140 Roosevelt Blvd
BP Gas	520 S Austin Blvd
BP Gas	201 Madison St
C Y Discount	6039 North Ave
Carnival Grocery	824 S Oak Park Ave
Fair Share	6226 Roosevelt Blvd

Food Mart	422 N Austin Blvd
Go Lo Gas Station	330 Chicago Ave
Jewel	7036 Roosevelt Blvd
KHI's Grocery	6120 Roosevelt Blvd
Mini-Mart	1116 South Blvd
Queen Beauty	14 Madison St
Shell Gas Station	6129 North Ave
Shell Gas	1 Harriston St
Shell Gas	401 Madison St
Snappy Convenience	622 Madison St
Tobacco Zone	7036 Roosevelt Blvd
True Discount	1115 Garfield St
Walgreens	6412 Roosevelt Blvd
Walgreens	801 Madison St

Attachment 2

SECTION 5. Chapter 245, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

- “§ 245-___ **Delivery sales.**
 - (a) No person shall conduct a delivery sale or otherwise ship or transport, or cause to be shipped or transported, any electronic smoking device in connection with a delivery sale to any person under the age of twenty-one.

- (b) A person who makes delivery sales shall not accept a purchase or order from any person without first obtaining the full name, birth date, and address of that person and verifying the purchaser's age by:
 - (1) An independently operated third-party database or aggregate of databases that are regularly used by government and businesses for the purpose of age and identity verification and authentication;
 - (2) Receiving a copy of a government issued identification card from the purchaser; or
 - (3) Requiring age and signature verification in the shipment process and upon and before actual delivery.
- (c) The purchaser shall certify their age before completing the purchaser's order.
- (d) Any person who violates this section shall be fined \$500 for the first offense. Any subsequent offenses shall subject the person to a fine of no less than \$500 but no more than \$2,000. Any person under twenty-one years of age who violates this section shall be fined \$10 for the first offense; provided that any subsequent offense shall subject the person to a fine of \$50, no part of which shall be suspended, or the person shall be required to perform no less than forty-eight hours but no more than seventy-two hours of community service during hours when the person is not employed or attending school.
- (e) The department shall not adopt rules prohibiting delivery sales.
- (f) For the purposes of this section:
 - "Delivery sale" means any sale of an electronic smoking device to a purchaser in the State where either:
 - (1) The purchaser submits the order for sale by means of a telephonic or other method of voice transmission, the mail or any other delivery service, or the internet or other online service; or
 - (2) The electronic smoking device is delivered by use of the mail or any other delivery service.
 - The foregoing sales of electronic smoking devices shall constitute a delivery sale regardless of whether the seller is located within or without the State.
 - "Electronic smoking device" means any electronic product that can be used to aerosolize and deliver nicotine or other substances to the person inhaling from the device, including but not limited to an electronic cigarette, electronic cigar, electronic cigarillo, or electronic pipe, and any cartridge or other component of the device or related product."