



Youth Vaping and Marijuana Use

Overview, Illinois Youth Survey Data, and Regulations

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Overview

- E-Cigarettes
 - What are E-Cigarettes?
 - Types of Electronic smoking devices
 - Juul
 - E-Juice and Pods
 - Risks Associated with use
 - Respiratory Infections Associated with Vaping
 - Illinois Youth Survey Data
- Marijuana
 - Marijuana
 - Vaping and THC
 - Regulation

What are Electronic Cigarettes

- Electronic Nicotine Delivery Systems (ENDS)
- Developed by a pharmacist in China in 2003
- Battery Operated
- Delivers nicotine, along with other chemicals and flavors, in a vapor instead of smoke like regular cigarettes
- The liquid is heated up and the user inhales the aerosol created

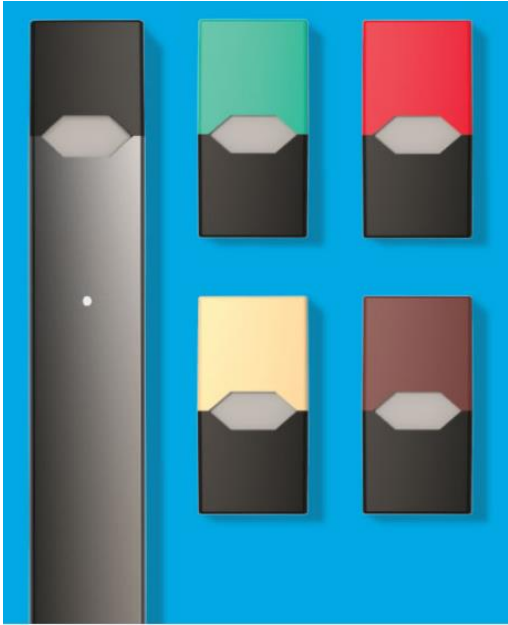


Inside E-Cigarettes

- E-Cigarette fluid contains nicotine, propylene glycol, glycerin, volatile organic compounds, heavy metals and flavorings
- Diacetyl, a buttery flavored chemical, can cause an irreversible lung disease known as “popcorn lung.”
- Some e-cigarettes marketed as 0% nicotine have been found to contain nicotine.
- E-cigarettes can be used to deliver marijuana

Electronic Smoking Devices

- 1st Generation “Cig-a-likes”
 - Resemble a traditional cigarette
 - Disposable and reusable devices
- 2nd Generation
 - Tank systems
 - Larger than 1st generation
 - Refillable liquid tanks
- 3rd Generation
 - Mechanical modifications
 - Ability to adjust the voltage
 - Can be ornate or discreet



JUUL

- Most popular e-cigarette with youth
 - Discreet, looks like a USB
 - Flavors include mango, mint, crème brulee
 - Referred to as “juuling” not vaping
- 1 pod has the same amount of nicotine as an entire pack of cigarettes
- “Juul in school” trends on social media and internet

E-Juice and Pods

- Currently 7,700 flavors of e-juice available
 - A bottle of e-juice contains enough nicotine to kill an adult and less than half of a teaspoon can be fatal to a toddler
- Pods come in many flavors as well
 - Each pod is the equivalent of a pack of cigarettes

Risks Associated with Use

- Nicotine is highly addictive
- Nicotine can harm the developing brain
- E-cigarette aerosol can contain harmful and potentially harmful substances including cancer causing chemicals
- Defective batteries have caused fires and explosions
- Acute nicotine exposure can be toxic
 - Young children more susceptible

Chemicals and Carcinogens

Forty-Two Chemicals Identified in Electronic Cigarettes		
2-butanone (MEK)	Butyl hydroxyl toluene	✓ = exposure can be harmful to health * Known Carcinogen
2-furaldehyde	Cadmium ✓ *	
Acetaldehyde ✓ *	Chromium ✓ *	
Acetic acid	Copper	
Acetone ✓	Crotonaldehyde	✓ = exposure can be harmful to health * Known Carcinogen
Acrolein ✓	Diethylene Glycol ✓	
Aluminum	Formaldehyde ✓ *	
Barium	Glyoxal	
Benzene ✓ *	Iron	
Boron	Isoprene ✓	
Butanal	Lead ✓ *	
	Limonene	
	m,p-Xylen	
	Magnesium	
	Manganese	
	Nickel ✓ *	
	Nicotine ✓	
	N-Nitrososornicotine ✓ *	
	o-Methylbenzaldehyde ✓	
	p,m-Xylene	
	Phenol ✓	
	Polycyclic Aromatic Hydrocarbons ✓ *	
	Potassium	
	Propanal ✓	
	Propylene Glycol ✓	
	Sulfur	
	Tin ✓	
	Toluene ✓	
	Valeraldehyde	
	Zinc	
	Zirconium	

Red = emitted in second hand vapor

IDPH Health Advisory

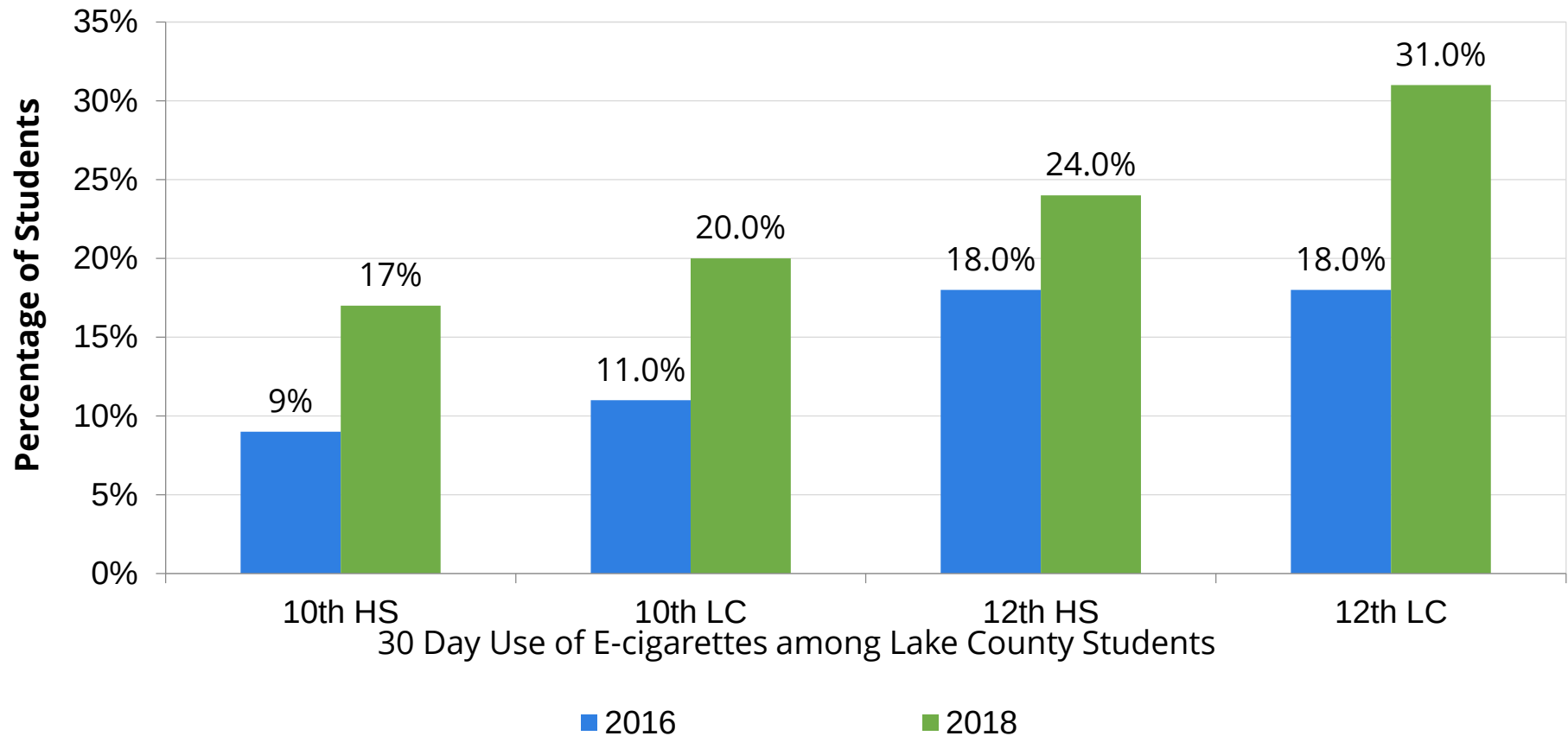
Respiratory Illness Associated with Vaping

- Total of 2,506 cases of EVALI across all 50 states
- In Illinois, 206 cases have been investigated
 - 5 deaths
- Data suggests Vitamin E acetate in THC based e-cigarette vaping products is to blame
- People who experience any type of chest pain or difficulty breathing after vaping in the weeks or months prior to these symptoms should seek immediate medical attention
- Up to date information can be found on both IDPH's and CDC's websites

Illinois Youth Survey Data

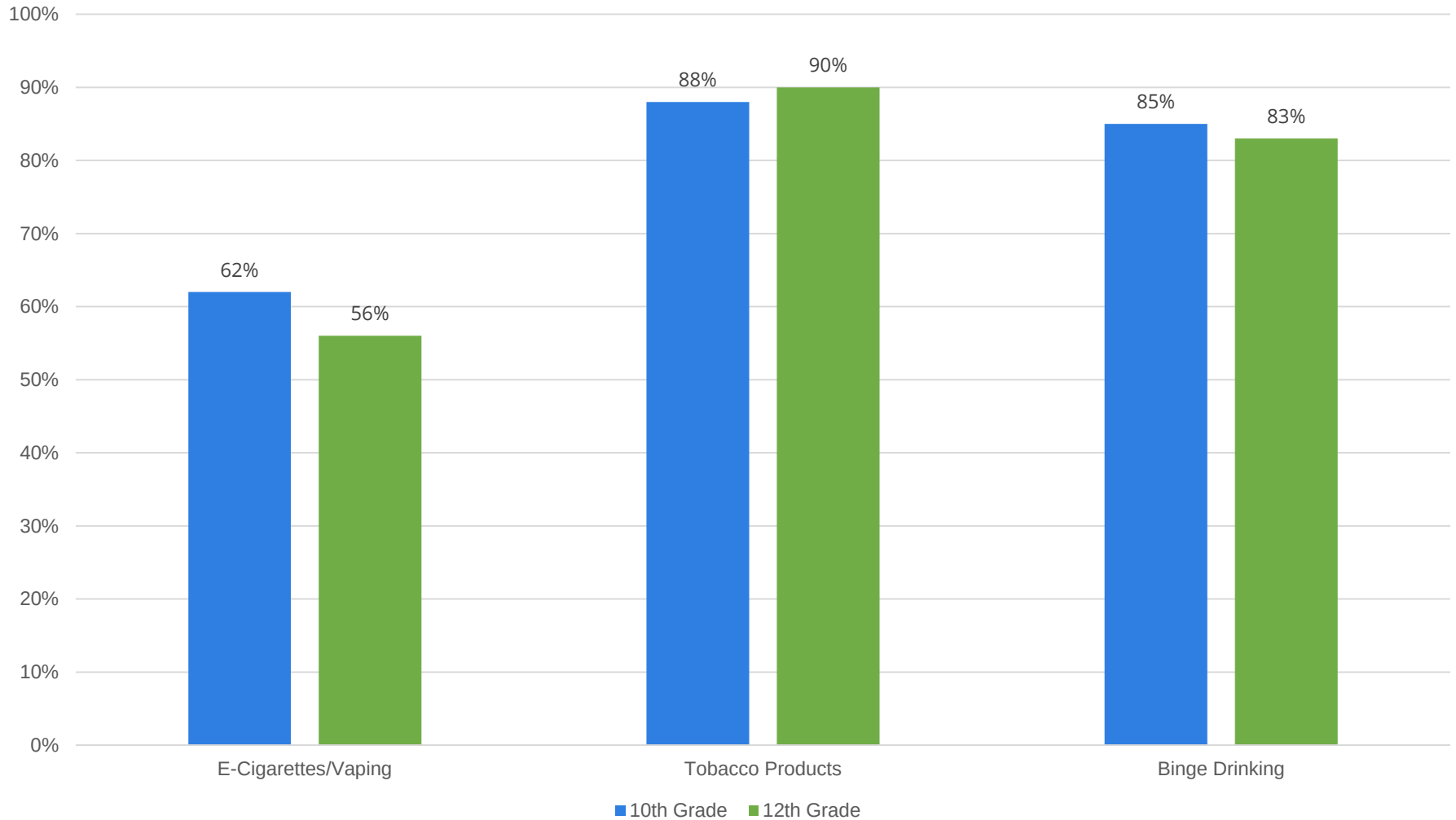
Warren & Lake County E-Cigarette Use 2016 and 2018

30 Day E-Cigarette Use



Perception of Harm

Moderate to Great Risk of Harm



Vaping Marijuana

- Vapes pull the active ingredients from marijuana (such as THC) and collect the vapor in a storage unit, which the user inhales.
- The amount of THC in marijuana has increased over the past few decades
 - According to NIDA, the average THC content was 3.8% in the early 1990s, 12.2% in 2014, and over 20% now.
- Higher THC levels may mean a greater risk for addiction to those regularly exposing themselves to high doses

Vaping Marijuana

- Dabs is a highly concentrated butane hash oil (BHO) created through a process where high quality cannabis is blasted with butane and extracted
 - A type of marijuana extract that is vaporized to get high (heated and inhaled)
 - Contains 70-90% THC compared to 20% THC in regular cannabis
 - Wax, oil, shatter/glass, crumble, budder

Vaping and THC

- THC Oil is concentrated THC (tetrahydrocannabinol)
- Vaping devices with THC vs. E-liquid
 - While not as strong as traditional marijuana, there is a scent of marijuana to the oil and vapor (dissipates quickly)
 - Dabs are a waxy concentration that can be visible in the vape's tank.
 - Nicotine based e-liquid often smells sweet
- Any psychological effects/risks associated with marijuana would be present in THC oil as well.
 - Cannabidiol (CBD) does not produce the “high” feeling associated with THC or marijuana

Regulation

- As of July 1st 2019, individuals must be 21 years old to purchase tobacco products – including e-cigarettes
 - Does not include possession or use
 - Local ordinances can be more stringent to include these conditions
- New Marijuana Legislation
 - Recreational marijuana is legal for individuals 21 and older
 - Possession is included – individuals cannot use or possess marijuana if you are under 21.

Contact Information and Resources

- Danielle Ryan or Lea Bacci
 - Email – dryan@lakecountyil.gov, lbacci@lakecountil.gov
 - Phone – 847-377-8108 (Danielle), 847-377-8024 (Lea)
- Centers for Disease Control and Prevention
 - E-Cig USB Infographic – For parents, educators, and healthcare providers
 - E-cig USB 2
 - E-Cig Infographic
- Surgeon General - <https://e-cigarettes.surgeongeneral.gov/>
 - Fact Sheet
 - Parents Tip Sheet



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