

2019 Connecticut Epidemiological Profile: Vaping



A product of the State Epidemiological Outcomes Workgroup (SEOW)

Prevalence

Vaping refers to the use of electronic cigarettes or electronic nicotine delivery systems (ENDS), which are metal or plastic tubes that aerosolize liquids, usually with nicotine, via a battery-powered heating element. The resulting aerosol is inhaled by the user and exhaled into the environment. There are many types of electronic smoking devices, including: e-hookahs, vape pens, e-cigarettes, and hookah pens. The liquid that is utilized in the device is called “e-juice” and is available in a variety of flavors and nicotine levels.

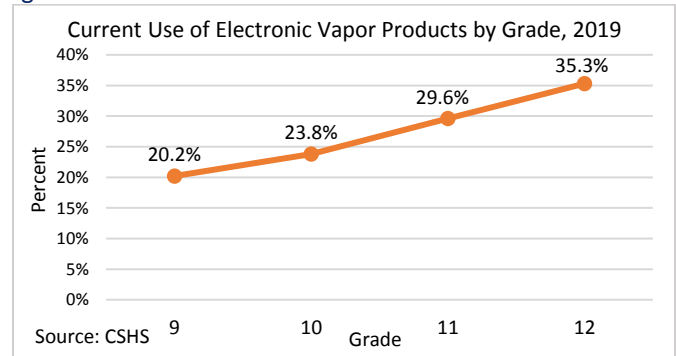
ENDS and e-cigarettes are an emerging problem nationally and in Connecticut, as rates continue to rise at a steady pace. According to Connecticut’s Behavioral Risk Factor Surveillance Survey (CT BRFS), the prevalence of ever using e-cigarettes has increased each year since 2012. The 2018 CT BRFS results showed that 19.6% of adults in Connecticut reported having tried e-cigarettes in their lifetime.¹

DataHaven’s 2018 Community Wellbeing Survey (CWS) reported similar results. According to the CWS, ENDS use is most prevalent among 18 to 34 year-olds (36%) with prevalence of use decreasing as age increased.² Past 30-day use of ENDS was highest among adults in the Urban Core communities, followed by Urban Periphery, then Suburban community types.²

ENDS use is of particular concern among youth, who report significantly higher use rates than adults. Nationally, the 2017 Youth Risk Behavior Survey (YRBS) results showed that 42.2% of high school students reported ever using an electronic vapor product, and 13.2% reported use in the past 30 days. Hispanic students (48.7%) and males (44.9%) had the highest prevalence of lifetime use, while non-Hispanic whites had the highest reported current use (15.6%).³

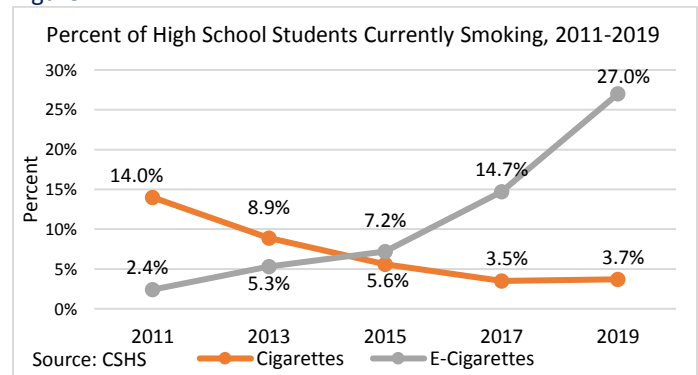
According to the 2019 Connecticut School Health Survey (CT YRBSS), current use of electronic vapor products rose to 27.0% among high school students. Current use reported by youth increased by grade (Figure 1).⁴

Figure 1.



Trend data show that as current cigarette smoking in Connecticut has declined, current e-cigarette smoking has increased (Figure 2), implying that e-cigarettes are replacing tobacco smoking as the main mechanism for nicotine delivery.

Figure 2.



Among Connecticut high school students in 2017, 37.1% perceived little or no harm in breathing the vapor from e-cigarettes. This perception is more prevalent among males (44.4%) than females (29.7%) but doesn’t vary significantly by race. Low perception of harm is much

¹Zheng X. (2018) CT BRFS.

²DataHaven and Siena College Research Institute (2018). 2018 DataHaven Community Wellbeing Survey.

³ Kann, L., McManus, T., & Harris et al., (2018). YRBS 2017.

⁴ CT DPH, 2019 Connecticut Youth Risk Behavior Survey Results

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higher among those who had ever used e-cigarettes (52.7%) compared to those who never used (28.8%).⁴

At-Risk Populations

Populations most at-risk for using ENDS are:

- Youth (12-17)⁵
- Young adults (18-34)¹
- Males¹
- Hispanics¹
- Current smokers
- Those living in urban communities²
- Adults from households earning less than \$35,000¹
- Adults with disabilities¹
- Those with a high school diploma or less¹
- Adults without health insurance¹

Consequences

- Evidence shows that young people who use e-cigarettes may be more likely to smoke cigarettes in the future.⁵
- A recent CDC study found that 99% of e-cigarettes sold in the US contained nicotine, which can cause harm to parts of the adolescent brain that control attention, learning, mood, and impulse control.⁵
- E-cigarette aerosol can contain several potentially harmful substances, including diacetyl (in flavorings), which is a chemical linked to serious lung disease. It can also contain volatile organic compounds, cancer-causing chemicals, and heavy metals such as nickel and lead.⁵
- Some ENDS devices, including those that are particularly popular among youth, have been modified to allow for higher doses of nicotine to be

delivered. They also facilitate the use of THC, and in higher potency. This is especially problematic in youth use, because of the increased risk of tobacco and cannabis use disorders later in life.⁶

- As of January 7, 2020, a total of 2,602 cases of e-cigarette or vaping product use-associated lung injury (EVALI) had been reported to the CDC across all 50 states, the District of Columbia, Puerto Rico and the U.S. Virgin Islands. Of these, 57 resulted in deaths. The median age of these patients was 24 years old, and 62% were between 18 and 34 years old. EVALI appears to be primarily driven by the use of THC-containing vaping products, possibly due to substances, such as vitamin E acetate, added to the formulations.⁶

Connecticut's Response

Effective October 1, 2019, Connecticut prohibited the sale/delivery of ENDS or vapor products to any person under the age of 21 as part of a bill referred to as "Tobacco 21". This bill also expands the Clean Indoor Air Act to prohibit use of ENDS and vapor products to school properties and day care center facilities or grounds at all times. It also requires the Department of Mental Health and Addiction Services (DMHAS) to conduct compliance checks on e-cigarette dealers and refers those that are noncompliant to the Department of Revenue Services.⁷ As result of the growing prevalence of vaping, prevention efforts at the state, regional and community levels have expanded to focus on ENDS prevention for youth and young adults.

For more data and information on alcohol use in Connecticut, visit the

Connecticut SEOW Prevention Data Portal

<http://preventionportal.ctdata.org/>

⁵ Centers for Disease Control and Prevention. (2019). Quick Facts on the Risks of E-cigarettes for Kids, Teens, and Young Adults. Retrieved from https://www.cdc.gov/tobacco/basic_information/e-cigarettes/

⁶ King BA, Jones, CM, Baldwin GT, & Briss PA. (2020). The EVALI and Youth Vaping Epidemics—Implications for Public Health.

⁷ Conn. Gen. Stat. § 53-344b(b) (2019)