



VAPOR PRODUCTS

Washington State Board of Health

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Presenter

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Washington State Department of Health

Overview

- Background on vapor products
- Vaping-associated lung injury investigation
- Current youth vaping epidemic
- Vapor product use in adults
- Executive Order

E-Cigarettes and Vapor Products

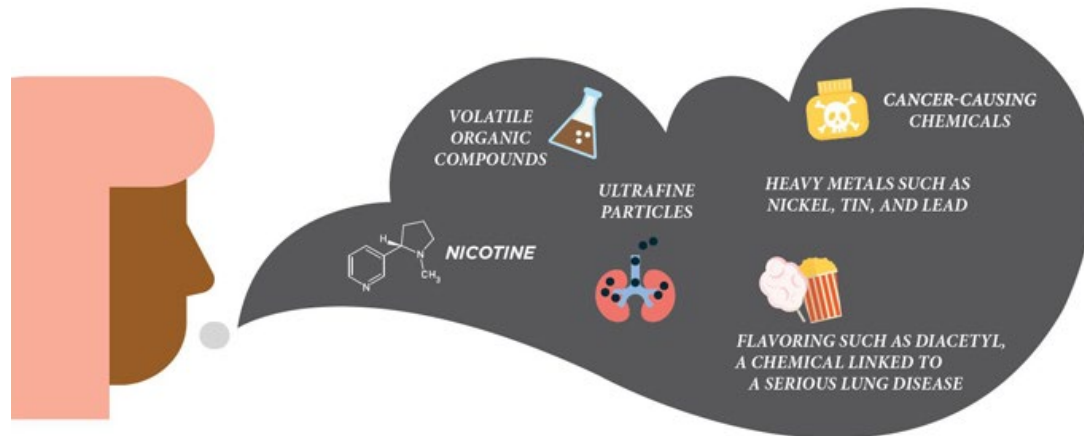


Most popular products among youth:



Components of Vaping Products

- Nicotine, marijuana, other drugs
- Propylene glycol, glycerol, other carrier agents
- Flavoring chemicals
- Other chemicals: ultrafine particles, volatile organic chemicals, heavy metals (nickel, tin, and lead), formaldehyde, ???



Sources:

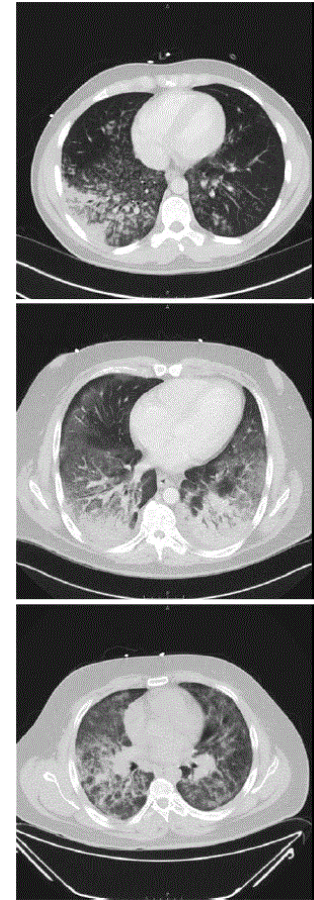
National Academies of Sciences, Engineering and Medicine, *Public Health Consequences of E-Cigarettes*, 2018.

E-Cigarette Use Among Youth and Young Adults: A Report of the Surgeon General, 2016

CDC, 2018. Accessed: https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html

Vaping-associated Lung Injury

- Common symptoms include cough, shortness of breath, chest pain, nausea, vomiting and/or fever
 - Progress over days or weeks
- Can lead to respiratory failure
- Abnormal findings on chest x-ray or CT scan
- Suspected cause is a chemical exposure



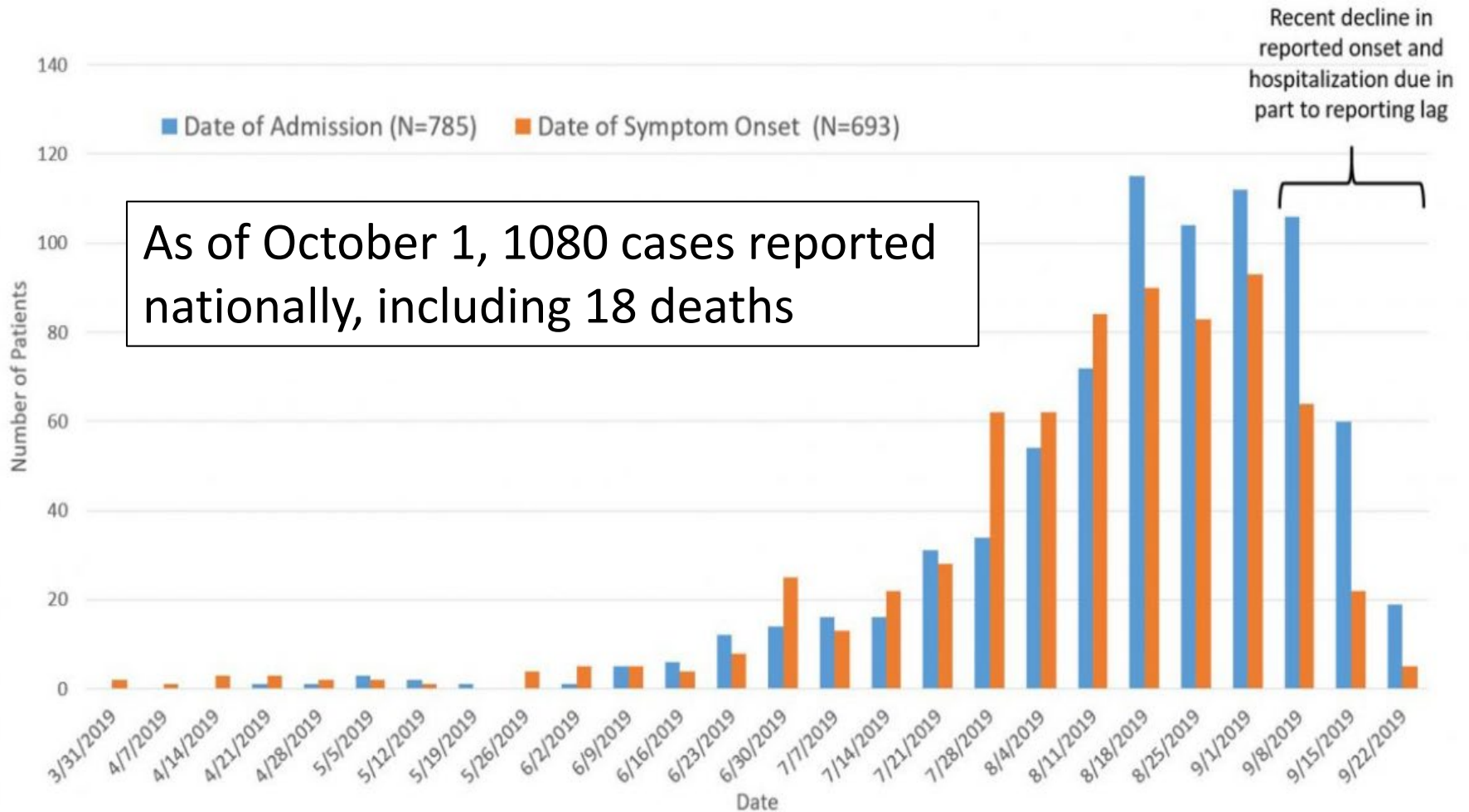
MMWR 2019;68:784–786

Source:

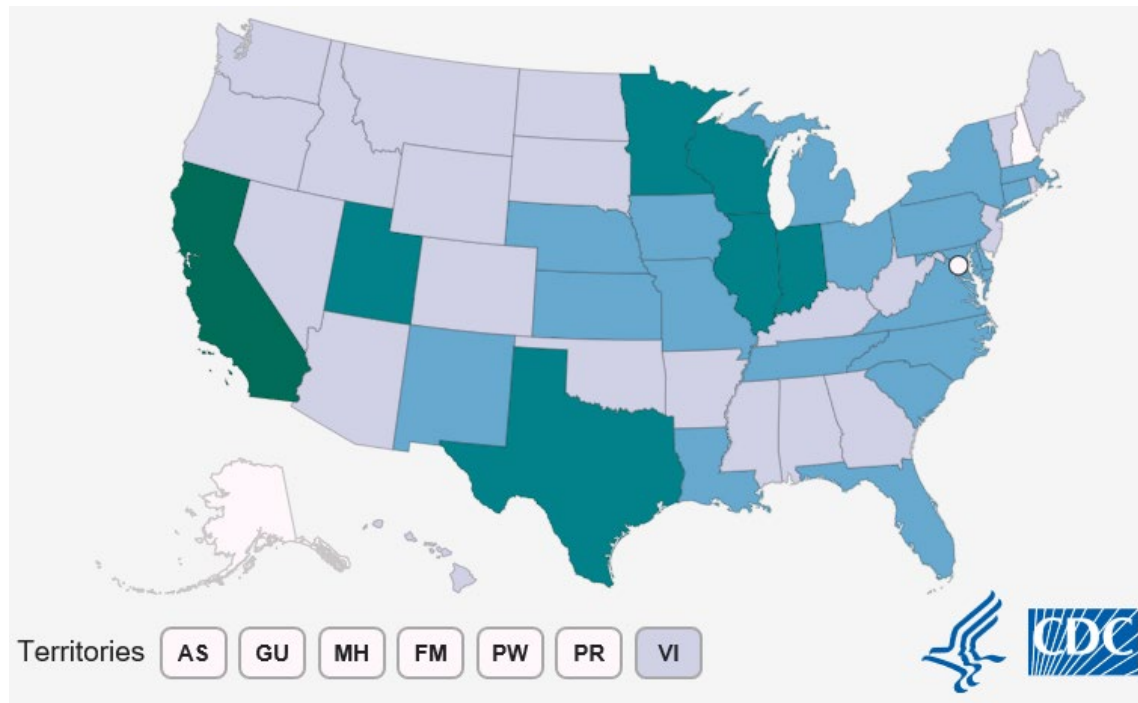
Centers for Disease Control (https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html)

Correspondence: Pathology of Vaping-Associated Lung Injury. *N Engl J Med* October 2, 2019.

Vaping-associated Lung Injury by Onset and Hospital Admission Date



Vaping-associated Lung Injury Reported to CDC*

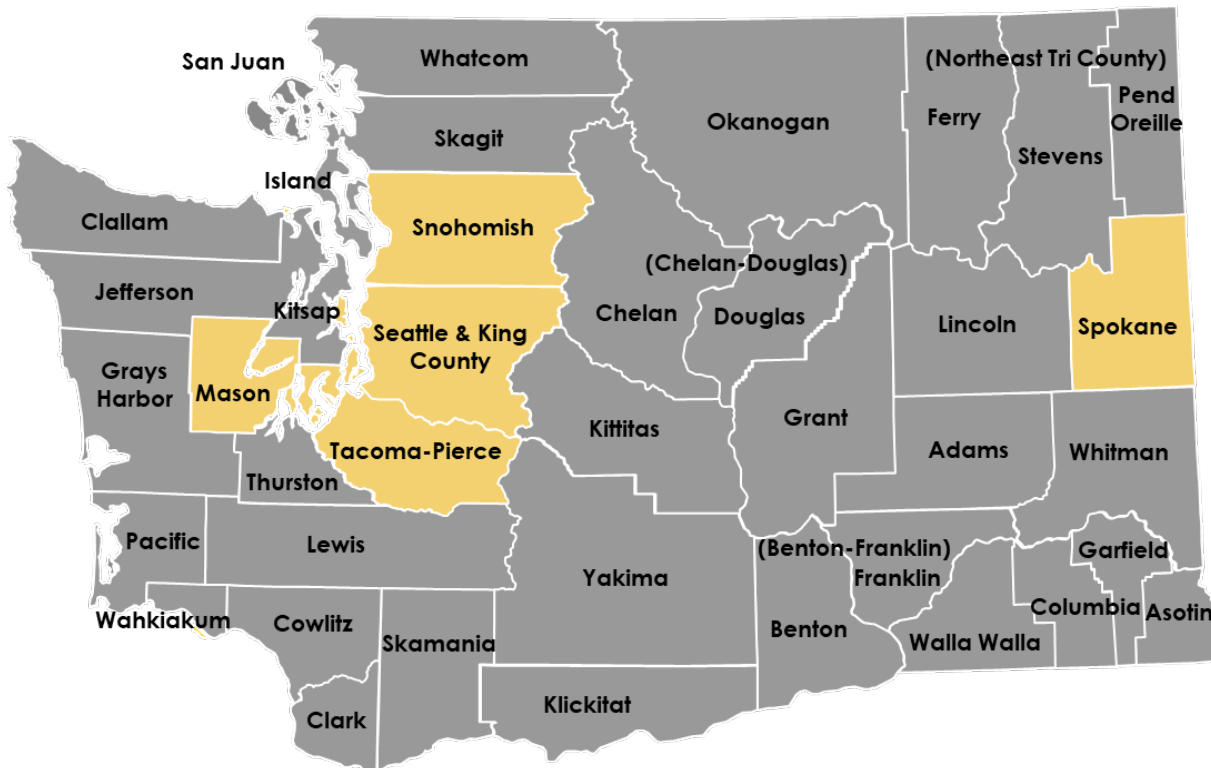


- 70% are male
- 81% of patients are under 35 years old
- ~78% reported using THC-containing products
- ~58% reported using nicotine-containing products
- THC-containing products playing a role
- Specific chemical(s) causing lung injuries unknown

*Note: Data as of October 1, 2019

Source: Centers for Disease Control (https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html)

Vaping-associated Lung Injury Reported in Washington*



- 7 case (no deaths)
- 4 are male
- 5 are < 30 years old
- 2 reported using only THC-containing products
- 1 reported using THC- and nicotine-containing products
- 3 reported using only nicotine-containing products
- 1 unknown

*Note: Data as of October 1, 2019

Source: Department of Health

Public Health Response in Washington

- Sending alerts to healthcare providers asking them to report suspected cases
- Looking at real-time hospital data for young people with severe lung injury
- Investigating suspect cases
 - Reviewing medical records & talking with providers
 - Interviewing patients about their vapor product use
- Partnering with FDA to test vapor products from cases
- Communicating risks to public

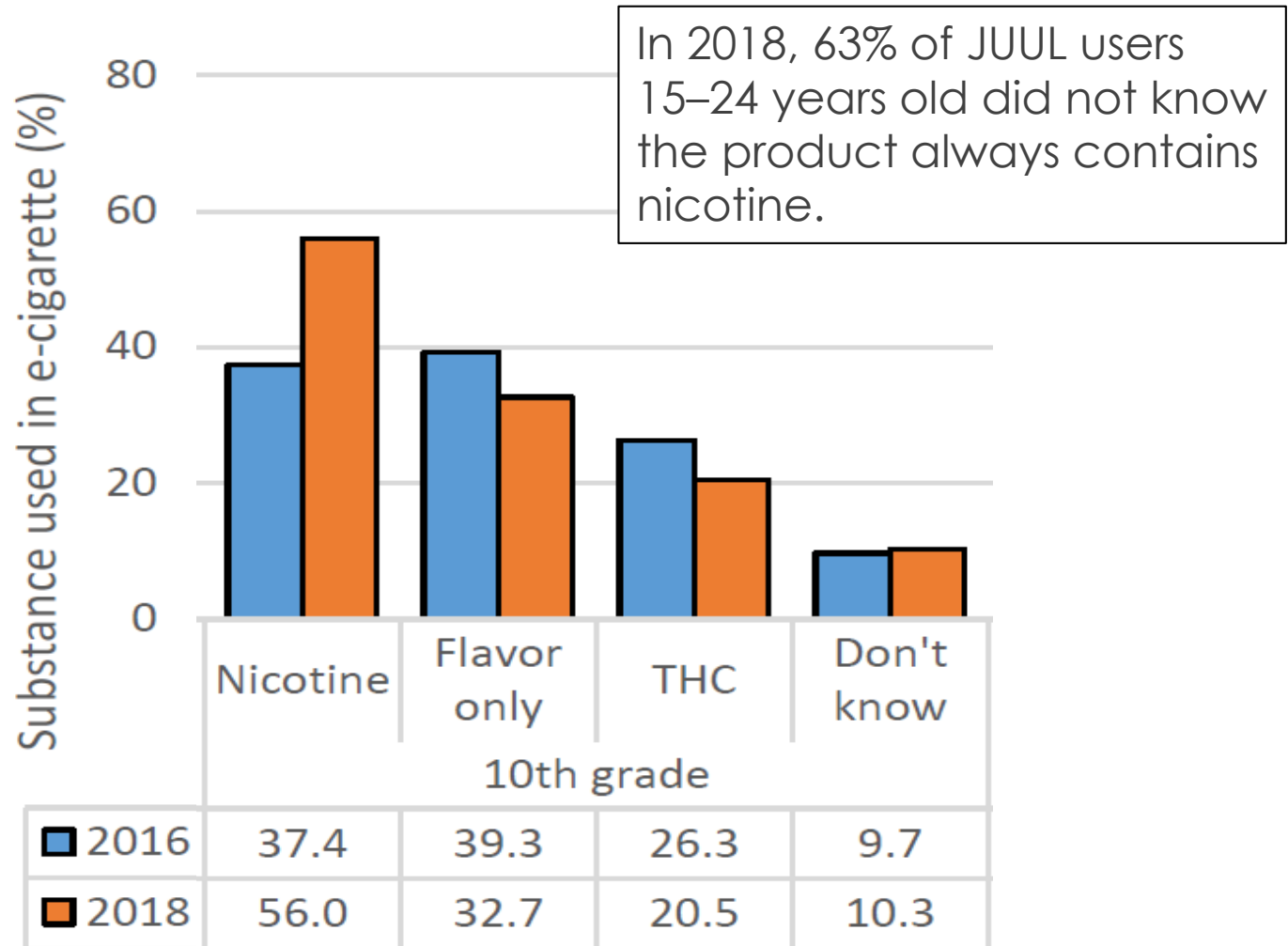


Youth Vaping Epidemic in Washington



	2012	2014	2016	2018
Vape only	1.3	12.2	8.5	17.7
Cigarette and vape	2.6	5.7	4.1	3.4
Cigarette only	6.7	1.8	1.6	0.6

Substances Reportedly Used in E-cigarettes



Vaping or E-cigarette Use Among Adults

Nicotine-containing vapor products

- In 2017, 2.8% of U.S. adults and 4.2% of WA adults used e-cigarettes on some days or every day
- In 2015, among U.S. adult e-cigarette users overall:
 - 59% also were current regular cigarette smokers
 - 30% were former regular cigarette smokers
 - 11% had never been regular cigarette smokers

Marijuana-containing vapor products

- In 2018, 4.3% of WA adults vaped marijuana products in the past 30 days

Sources:

MMWR 2018;67(44):1225–1232.

MMWR 2016;65:1177.

Washington State Behavioral Risk Factor Surveillance System

E-cigarettes as Smoking Cessation Tool

- National Academies of Science (2018)
 - Insufficient evidence from randomized controlled trials on effectiveness of e-cigarettes as cessation aids compared with no treatment or FDA-approved aids
- Randomized controlled trial (2019)
 - E-cigarettes vs. nicotine replacement therapy (NRT)
 - 1-year abstinence rates 18% vs. 9.9% (RR 1.83; P<0.001)
 - 80% in e-cig group vs. 9% in NRT still using product at 1 year
- E-cigarettes are not FDA-approved smoking cessation aids

Sources:

National Academies of Sciences, Engineering and Medicine, Public Health Consequences of E-Cigarettes, 2018.
N Engl J Med. 2019;380(7):629-637.

E-cigarettes as Harm Reduction Tool for People Who Currently Smoke

- Completely substituting e-cigarettes for combustible tobacco reduces exposure to many toxins and carcinogens
- Dual use of cigarettes and e-cigarettes does not necessarily reduce exposure to toxic substances
- Smoking even a few cigarettes a day can be dangerous

Sources:

National Academies of Sciences, Engineering and Medicine, *Public Health Consequences of E-Cigarettes*, 2018.

Goniewicz ML et al. *JAMA Network Open*.2018. (<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2718096>)

Tobacco Control 2005;14(5):315–20

Governor's Executive Order 19-03

- SBOH

- Emergency rule to ban flavored products

- DOH

- Ban cause of outbreak (in collaboration with LCB)
- Consumer warnings
- Ingredient disclosure
- Provider reporting
- Education campaign
- Legislation

Source: https://www.governor.wa.gov/sites/default/files/exe_order/19-03%20-%20Addressing%20the%20Vaping%20Public%20Health%20Crisis%20%28tmp%29.pdf



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Substances Reportedly Used in E-cigarettes

