



Department  
of Health

# Vaping-Associated Pulmonary Illness in New York State



Brad Hutton  
Deputy Commissioner, Office of Public Health

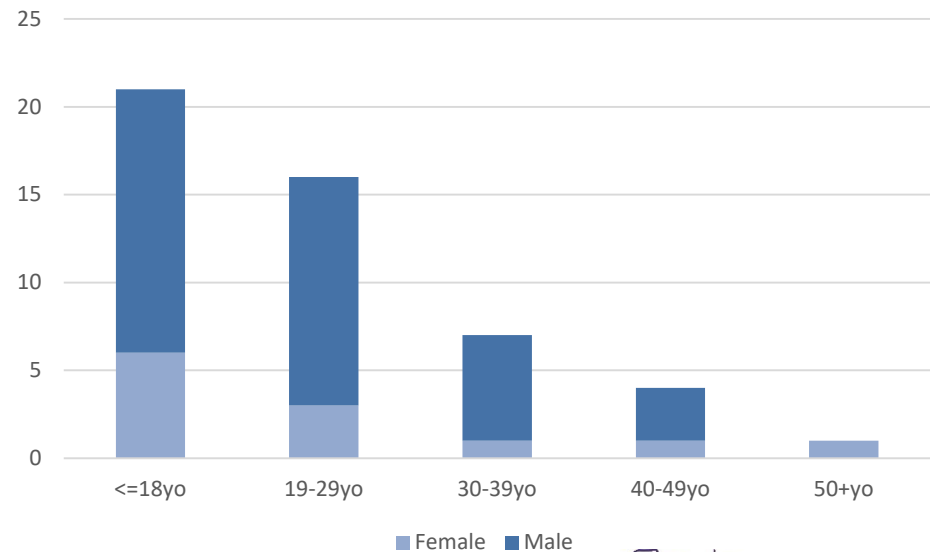
# Public Health Investigation

- First reports of possible vaping-associated pulmonary illnesses were received by the Department in early August 2019
  - Symptoms dated as far back as June 2019
- Communication with CDC revealed a larger national outbreak of illness
  - Over 450 possible cases in 33 states and 1 US territory
- 49 reports have been made in NYS (as of 9/10/19)

# Epidemiologic Investigation

- Of the 49 cases reported (as of 9/10/19)
  - Majority patients male (76%)
  - Age
    - Range: 14 - 57 years old
    - Mean: 26 years old
    - Median 20 years old
  - 96% of patients required hospitalization
  - At least 3 patients required intubation

Vaping-Associated Pulmonary Illness  
Reported Patients: Age and Sex Demographics  
(as of 9/10/19)



# Laboratory Investigation



- Product samples have been sent to Wadsworth Center for testing
- 49 samples from 11 patients have been received by Wadsworth
- Of the 9 patients for whom test results are available, each submitted at least 1 THC vape pen containing vitamin E acetate

# Vitamin E Acetate

- Common vitamin supplement not known to be harmful when ingested or applied to the skin
- May be associated with serious health effects when inhaled due to oil-like properties



# Department of Health Action

- August 15<sup>th</sup> – Health Advisory sent to healthcare, substance use and mental health communities, and local health departments

- September 6<sup>th</sup> – Public Notification



Department  
of Health

ANDREW M. CUOMO  
Governor

HOWARD A. ZUCKER, M.D., J.D.  
Commissioner

SALLY DRESLIN, M.S., R.N.  
Executive Deputy Commissioner

August 15, 2019

TO: Healthcare Providers, Hospitals, Off-Campus Emergency Departments, Substance Use Disorder/Mental Health Agencies, College and University Health Clinics, and Local Health Departments

FROM: New York State Department of Health

**HEALTH ADVISORY:  
Unexplained Vaping-associated Pulmonary Illness**

For healthcare facilities/hospitals, please distribute to the Emergency Department, Director of Nursing, Medical Director, Director of Psychiatry, Director of Pharmacy, and Laboratory Service.

**Summary**

This advisory is to inform you of an emerging health threat of severe pulmonary disease associated with the use of vape products. This message includes information on case presentation and steps to take if you suspect lung disease in patients reporting use of vape products.

**Current Situation**

Cases of severe pulmonary disease have been reported in New York State (NYS) among patients who reported recent use of vape products. As of the date of this alert, 10 cases have been reported from various areas of NYS, including the Capital District, downstate, and western region. Patients have ranged in age from 18-49 years old. Detailed information about the reported vape products used is still being investigated, including the name and type of products as well as where they were obtained and the method of delivery and use. However, many cases have reported the use of tetrahydrocannabinol (THC)-containing vape products, as well as other vaping products, in the weeks to months prior to presentation.

Similar cases of severe pulmonary disease associated with vape product use have been reported in several other states, and NYS is working with the Centers for Disease Control and Prevention as part of the epidemiological and laboratory investigation. While no deaths have been reported to date, some patients have had progressive respiratory compromise requiring endotracheal intubation.

**Clinical Presentation and Findings:**

Cases have reported various symptoms upon presentation, including:

- Cough
- Pleuritic chest pain
- Shortness of breath
- Fever
- Headache
- Fatigue
- Nausea
- Diarrhea
- Anorexia
- Weight loss

Empire State Plaza, Corning Tower, Albany, NY 12237 | health.ny.gov

The screenshot shows the Department of Health website with a navigation bar (Services, News, Government, Legal) and a main content area. The main heading is "Department of Health" with sub-sections: Individuals/Families, Providers/Professionals, Health Facilities, and Search. The central focus is a purple banner for "Vaping-Associated Pulmonary Illness" with a sub-heading "Messages can be dangerous if you aren't vaccinated." Below this is a section titled "Vaping-Associated Pulmonary Illness" featuring an image of various vape products (Menthol, Obsidian, RAZR, Diamond OG) and a vape pen. To the right of the image is a "LOCAL HEALTH DEPARTMENTS" section with a list of questions: "Have health departments around disease, chronic health and print the public for health problems and factors?", "Do you?", "Have help getting your child immunized?", "Need to get a vaccine for your pet?", "Feel sick after eating at a restaurant?", "Want to learn about the health needs in your community?", and "Need to report a potential health concern?". Below the image is a "CURRENT OUTREACH CAMPAIGNS" section with two items: "New York State Paid Family Leave" and "New York Has a Plan to End the AIDS Epidemic". At the bottom left, there is a "NEWS" section with a list of recent news items, including "September 6, 2019 Governor Cuomo Issues Aggressive Action to Protect New Yorkers from Identified and Additional Vaping Products by Towing Recall of Vaping-Associated Products Nationwide", "September 2, 2019 New York State Health Commissioner Issues Guidance on Vaping-Associated Diseases", "September 5, 2019 New York State Department of Health Announces Update on Investigation into Vaping-Associated Pulmonary Diseases", and "August 30, 2019 NY State of Health Connects Parents".



Department  
of Health

# Recent NYS Actions

- Subpoena Issuance
  - Honey Cut Diluting Agent
    - Honey Cut Labs LLC, Santa Monica, CA
  - Uber Thick
    - Floraplex Terpenes, Ypsilanti, MI
  - Pure Diluent
    - Mass Terpenes, Amherst, MA



# Recent NYS Actions

- Emergency Regulations
  - Requires entities in NYS that sell vaping products to post signage on the dangers of vaping illegal e-cigarette and e-liquid products





# E-cigarettes and Vaping

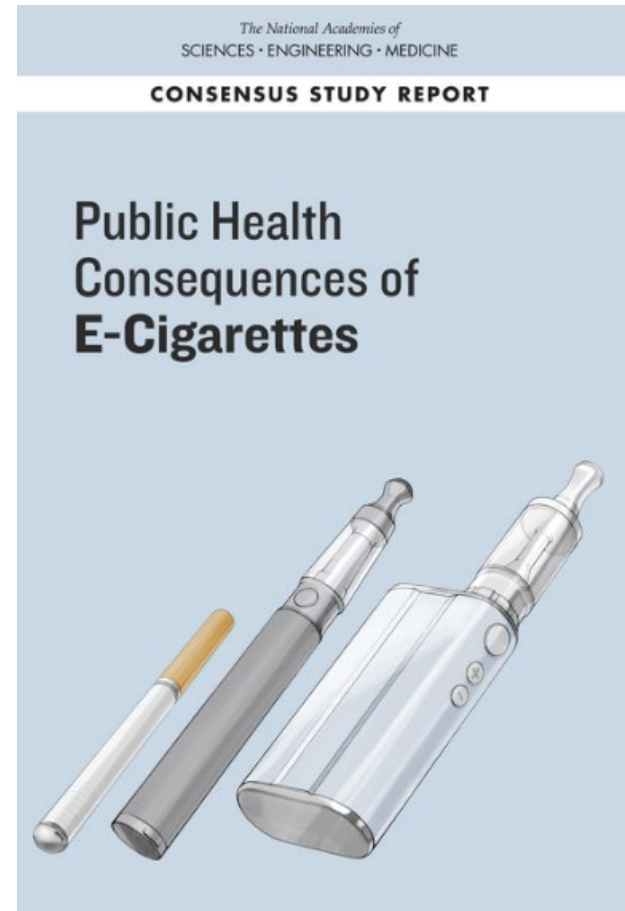
## Regulatory Definitions

- (a) ...“e-cigarette” mean an **electronic device that delivers vapor which is inhaled by an individual user**, and shall include any refill, cartridge and any other component of such a device.
- (b) ... “e-liquid” means **the solution, substance or material used in an e-cigarette** and heated to produce an aerosol or emission to be inhaled by the user, **whether the liquid contains nicotine or not**.
- (c) ...“flavored e-liquid” means **any e-liquid with a distinguishable taste or aroma**, other than the taste or aroma of tobacco or menthol ... including but not limited to ... any fruit, chocolate, vanilla, honey, candy, cocoa, dessert, alcoholic beverage, herb or spice, or any of a number of “concept flavors” that impart a taste or aroma that is distinguishable from tobacco flavor but may not relate to any particular known flavor.
- (1) This **includes ... products that are not clearly labeled as having no flavor or tobacco flavor only**.

# National Academy of Science, Engineering and Medicine

**Conclusion 5-1.** There is **conclusive evidence** that in addition to nicotine, **most e-cigarette products contain and emit numerous potentially toxic substances.**

**Conclusion 10-4.** There is **substantial evidence** that some chemicals present in e-cigarette aerosols (e.g., formaldehyde, acrolein) are capable of causing **DNA damage and mutagenesis.**



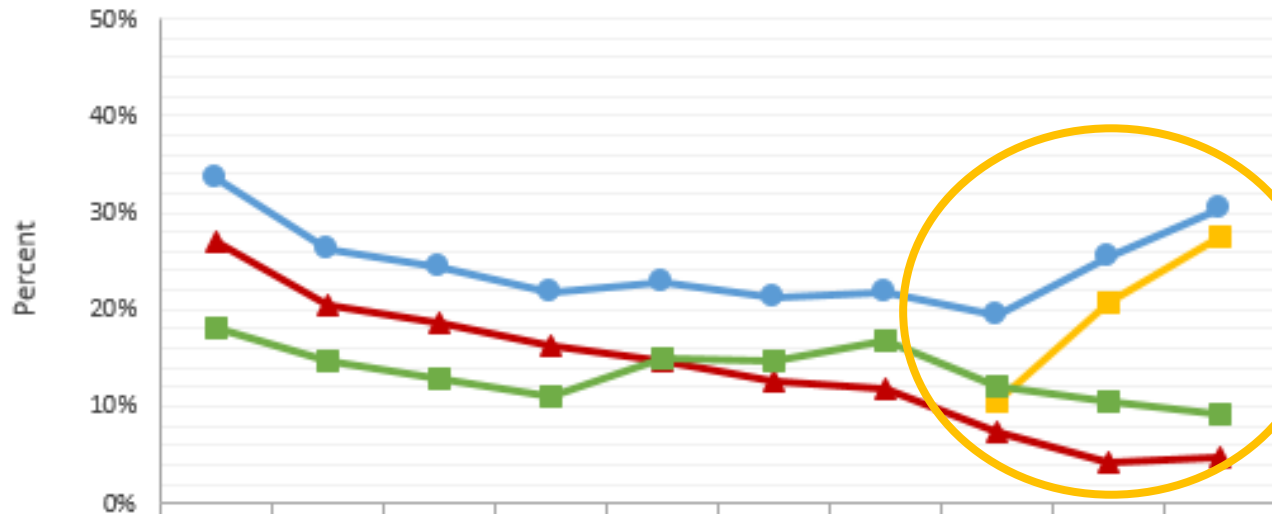
# Regulatory Process

- Emergency Regulations
  - Amend Section 225 of the Public Health Law, Title 10
  - Add new subpart 9-2 titled: “Required Signage”

# Youth Use is an Urgent Public Health Concern

- Nearly 40 percent of 12<sup>th</sup> grade students and 27 percent of high school students are now using e-cigarettes and this increase is largely driven by flavored e-liquids.
- High school use in 2018 (27.4%) is 160 percent higher than it was in 2014 (10.5%).
- Flavoring is a key youth marketing strategy of the vaping/aerosol industry just as it is in the cigarette, cigar, and smokeless tobacco markets.
- Flavors are a principal marketing strategy that appeals to youth and young adults, and the flavorant chemicals used in e-cigarettes have been approved by the FDA for ingestion but not inhalation.

## Trends in Any Tobacco Product Use among High School Students in NYS, 2000-2018



	2000	2002	2004	2006	2008	2010	2012	2014	2016	2018
Any Tobacco Products	33.6%	26.2%	24.3%	21.8%	22.8%	21.2%	21.8%	19.5%	25.4%	30.5%
Cigarettes	27.1%	20.4%	18.5%	16.3%	14.7%	12.6%	11.9%	7.3%	4.3%	4.8%
E-Cigarettes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10.5%	20.6%	27.4%
Other Tobacco Products	18.1%	14.6%	13.0%	11.0%	15.0%	14.8%	16.8%	12.0%	10.6%	9.2%



**THE TOBACCO**  
**INDUSTRY HAS**  
**A KIDS MENU.**

FlavorsHookKids.org



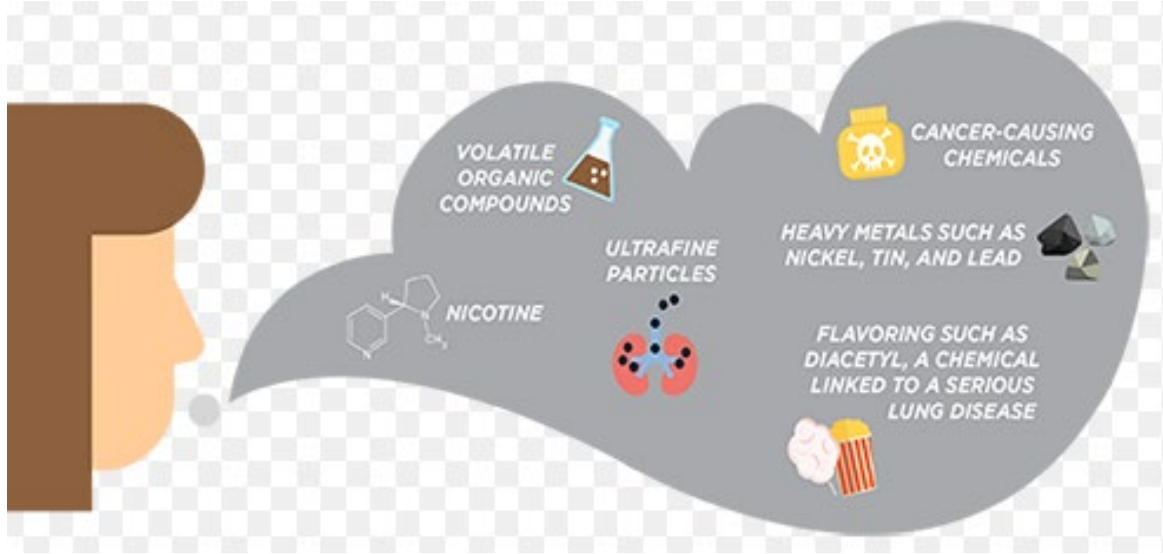
CELEBRATING 20 YEARS

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# NICOTINE & TOBACCO RESEARCH

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 SOCIETY FOR RESEARCH ON NICOTINE & TOBACCO

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 | Department of Health

## E-Cigarette Use Among Youth and Young Adults

A Report of the Surgeon General



U.S. Department of Health and Human Services



**Tobacco aside,  
e-cigarette flavorings  
may harm blood vessels**

**The American Academy of Pediatrics  
Issues Sweeping Recommendations on  
Tobacco and E-Cigarettes**



Facts and fiction on e-cigs

### What are they?

Electronic cigarettes, also known as e-cigarettes, e-cigs or, most accurately, Electronic nicotine delivery systems (ENDS), are devices that deliver an aerosol (incorrectly called 'vapour'), inhaled by the users and created by heating a solution, usually composed of propylene glycol or glycerol (glycerin) and flavourings, generally with nicotine. While they both contain nicotine, e-cigarettes and traditional cigarettes are entirely different products. Thus, while the vapour from e-cigarettes does not contain some of the harmful substances in traditional cigarettes, it does contain different harmful substances not found in traditional cigarettes, so the health effects of using both can be expected to be greater than either alone. ENDS have been heavily marketed in some countries in recent years. In 2017, about 15% of the European population had tried e-cigs at least once in their life.<sup>1</sup>

### The WHO view on e-cigs

In 2016, the World Health Organization (WHO)<sup>2</sup> noted that, while e-cigarettes *might* be less harmful than conventional cigarettes, e-cigarettes still pose important risks to health, and that ENDS regulation should:

- Deter e-cigarette promotion to non-smokers and young people;
- Minimise potential health risks to e-cigarette users and nonusers;
- Prohibit unproven health claims about e-cigarettes;
- Prevent/Bar/Ban involvement of the tobacco industry in the marketing and promoting of e-cigarettes.

### The legislative situation in Europe

As of May 2016 all European Union (EU) countries must comply with the EU Tobacco Products Directive that includes regulations for ENDS. The Directive<sup>3</sup> states that their packaging should provide information on toxicity and addictiveness, health warnings, and a list of all the substances contained in the product, including the exact level of nicotine (that should be in a concentration level of no more than 20 mg/mL). The Directive also requires that advertising and promotion rules for tobacco products also apply to electronic cigarettes.

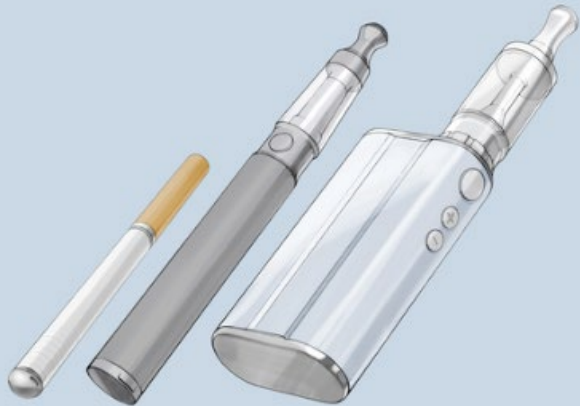




The National Academies of  
SCIENCES • ENGINEERING • MEDICINE

CONSENSUS STUDY REPORT

Public Health  
Consequences of  
**E-Cigarettes**



## National Academy of Science, Engineering and Medicine

**Conclusion 16-1.** There is **substantial evidence** that e-cigarette use **increases risk of ever using combustible tobacco cigarettes** among youth and young adults.

**Conclusion 16-2.** Among youth and young adult e-cigarette users who ever use combustible tobacco cigarettes, there is **moderate evidence** that **e-cigarette use increases the frequency and intensity of subsequent combustible tobacco cigarette smoking.**

# NYS Actions

- On Monday, the Governor announced he will propose legislation banning flavorings

