Addressing the E-Cigarette Epidemic in New York State

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Overview

• Investigation of vaping-associated pulmonary illnesses
• E-cigarette surveillance and trends
• E-cigarette evidence base
• New York State actions
Public Health Investigation

• First reports of possible vaping-associated pulmonary illnesses were received by NYSDOH in early August 2019
  o Symptoms dated as far back as June 2019
• Communication with CDC revealed a larger national outbreak of illness

• E-cigarette, or vaping, product use associated lung injury (EVALI)
  o 1,299 cases in 49 states, DC, and 1 US territory
  o 70% male
  o Median age: 24 years; range: 13 to 75 years
  o 26 deaths
    (As of 10/8/19)

https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html
Public Health Investigation

• To date, national and state data suggest that products containing THC, particularly those obtained off the street or from other informal sources, are linked to most of the cases and play a role in the outbreak.

• The specific chemical exposure(s) causing lung injuries associated with e-cigarette use, or vaping, remains unknown at this time.

• Among 573 patients with information on substances used in e-cigarette, or vaping, products in the 3 months prior to symptom onset:
  o About 76% reported using THC-containing products; 32% reported exclusive use of THC-containing products.
  o About 58% reported using nicotine-containing products; 13% reported exclusive use of nicotine-containing products.

https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html
NYS Investigation Update

Total reported patients statewide: 125 (Updated: 10/15/2019)

Breakdown of reported patients by region:

- Western New York: 31
- Central New York: 13
- Capital Region: 20
- Northern New York: 2
- Metropolitan Region (outside of NYC): 31
- New York City: 25
- Out of State: 3*

*Patients treated at hospitals in NYS but are residents of another state.

Source: New York State Department of Health
Laboratory Investigation

- Product samples have been sent to Wadsworth Center for testing
- Over 180 samples from 37 patients have been received by Wadsworth
- Of the 35 patients for whom test results are available, 27 submitted at least 1 THC vape pen, while 8 submitted nicotine containing pen(s) only
- 9 of the 27 who submitted THC containing pen(s) also submitted nicotine containing product(s)
- Pens from 25 of the 27 patients who submitted THC pen(s) contained vitamin E acetate.
Case Interviews

- Generally otherwise healthy adolescents and young adults
- Symptom onset ranges from a few days to a few weeks
- Wide variety of product use, including nicotine and cannabis products (THC and CBD), many using multiple types of products
- Variety of product names
- Many patients report a general “unwell” feeling that preceded their respiratory symptoms
- Several patients were seen in outpatient settings or ED and treated for pneumonia prior to hospital admission
Public Health Recommendations

• Persons should not use e-cigarette, or vaping, products that contain THC.

• Persons should not buy any type of e-cigarette, or vaping, products, particularly those containing THC, off the street.

• Persons should not modify or add any substances to e-cigarette, or vaping, products, including products purchased through retail establishments.

https://www.cdc.gov/mmwr/volumes/68/wr/mm6841e3.htm?s_cid=mm6841e3_w
Public Health Recommendations

• The possibility that nicotine-containing products play a role in this outbreak cannot be excluded, given the exclusive use of nicotine products reported by some individuals.
• Therefore, persons should consider refraining from using e-cigarette, or vaping, products that contain nicotine.
• If adults are using e-cigarette, or vaping, products to quit cigarette smoking, they should not return to smoking cigarettes; they should use evidence-based treatments, including health care provider counseling and FDA-approved medications.
• Irrespective of the ongoing investigation, e-cigarette, or vaping, products should never be used by youths, young adults, or women who are pregnant.
• Persons who do not currently use tobacco products should not start using e-cigarette, or vaping, products.

https://www.cdc.gov/mmwr/volumes/68/wr/mm6841e3.htm?s_cid=mm6841e3_w
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Data Sources

- Adult Tobacco Survey (ATS, 2012-)
- Youth Tobacco Survey (YTS, 2014-)
- Retail Advertising in Tobacco Survey (RATS, 2014-)
- Chronic Disease Public Opinion Poll (CDPOP, 2015-)
- Behavioral Risk Factor Surveillance System (BRFSS, 2016-)
- Youth Risk Behavior Survey (YRBS, 2015-)
### Topics Assessed

**YTS**
- Nicotine/Tobacco product first tried
- Openness to trying ENDS
- Awareness of ENDS marketing

**ATS**
- Ever use
- Current use
- Source of ENDS

**RATS**
- Presence and location of ENDS
- Presence of ads and price promotions
- Price of products

**Chronic Disease Public Opinion Poll**
- Policy Support

**BRFSS & YRBS**
- Ever & current use
NYS Youth are Vaping at Increasingly High Rates

Source: NY Youth Tobacco Survey, 2000-2018
Current Electronic Cigarette Use Among High School Youth by Grade Level, NYS-YTS 2014-2018

Source: NY Youth Tobacco Survey, 2014-2018
Prevalence of Cigarette, Vaping Product, and Dual Use

- Youth vaping rates continue to rise, while adults continue to smoke:
  - Youth who only vape: 5.9% in 2014, increased to 22.7% in 2018
  - Adults who only vape: 2.0% in 2014, unchanged at 3.3% in 2018

Sources: NY Youth Tobacco Survey and NY Adult Tobacco Survey, 2014–2018
Examples of E-Cigarette Advertising

Sources: Marlboro ad on Google images, Vintage cigarette ads on Google images, JUUL billboard in NYC, blu eCig ad
E-Cigarette Flavors

THE TOBACCO INDUSTRY HAS A KIDS MENU.

FlavorsHookKids.org
96.1% of 12- to 17-year-olds who had initiated e-cigarette use since the last survey started with a flavored product.

97.0% of current youth e-cigarette users had used a flavored e-cigarette in the past month.

70.3% of current youth e-cigarette users said they use e-cigarettes “because they come in flavors I like”.

Source: (National) Population Assessment of Tobacco and Health (PATH), 2016-2017
NYS Youth Prefer Fruit and Menthol Flavored E-Cigarettes

Percentage of adolescent vaping users who selected the flavor they like best

Source: 2019 NY Adolescent E-Cigarette Survey, NYSDOH
Nearly Half of NYS Youth Think Flavored E-Liquid is Less Harmful Than Tobacco Flavored E-Liquid

- When asked “How harmful to your health do you think different flavors of e-liquid are?”:
  - Nearly half of youth respondents rated flavored e-liquid as less harmful than tobacco flavored e-liquid.

Source: 2019 NY Adolescent E-Cigarette Survey, NYSDOH
New York adults support policies that would restrict youth access to e-cigarettes

83% Support a policy to restrict e-cigarette advertising to youth under the age of 18

56% Support a policy to ban the sale of flavored nicotine used in e-cigarettes

63% of New Yorkers favor raising the minimum age to 21 to purchase cigarettes, e-cigarettes and other tobacco products

NYSDOH Chronic Disease Public Opinion Poll
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E-Cigarettes are Harmful to Health

• Most e-liquids contain nicotine, the highly addictive chemical in all tobacco products.

• Nicotine can harm the developing brain of adolescents and young adults, which can:
  o lead to lower impulse control and mood disorders
  o disrupt attention and learning
  o prime the developing brain for addiction to alcohol and other drugs, such as cocaine

 Nicotine Can Lead to Addiction

E-cigarettes Make Aerosol, Not Vapor

THE E-CIGARETTE AEROSOL THAT USERS BREATHE FROM THE DEVICE AND EXHALE CAN CONTAIN HARMFUL AND POTENTIALLY HARMFUL SUBSTANCES:

- VOLATILE ORGANIC COMPOUNDS
- CANCER-CAUSING CHEMICALS
- ULTRAFINE PARTICLES
- HEAVY METALS SUCH AS NICKEL, TIN, AND LEAD
- FLAVORING SUCH AS DIACETYL, A CHEMICAL LINKED TO A SERIOUS LUNG DISEASE

Public Health Consequences of E-Cigarettes
Report Conclusions

8 – Conclusive Evidence
10 – Substantial Evidence
8 – Moderate Evidence
12 – Limited Evidence
4 – Insufficient Evidence
5 – No Evidence

47 Conclusions of which 21 have Limited, Insufficient or No Evidence
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.

Conclusion 17-3. There is **insufficient evidence** from randomized controlled trials about the effectiveness of e-cigarettes as cessation aids compared with no treatment or to Food and Drug Administration-approved smoking cessation treatments.
Selected Report Conclusions

Conclusion 8-1. There is **substantial evidence** that e-cigarette use results in symptoms of dependence on e-cigarettes.

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.

Conclusion 11-4. There is **moderate evidence** for increased cough and wheeze in adolescents who use e-cigarettes and an association with e-cigarette use and an increase in asthma exacerbations.
The American Academy of Pediatrics Issues Sweeping Recommendations on Tobacco and E-Cigarettes

Tobacco aside, e-cigarette flavorings may harm blood vessels
Do E-Cigarettes Aid in Quitting Smoking?

- E-cigarettes are not an FDA-approved cessation product.
- The safety of e-cigarettes remains unknown.
- There is no evidence that there is any significant increase in quitting cigarettes as e-cigarette use becomes more common.
- While there appears to be little quitting associated with e-cigarette uptake, dual use of cigarettes and e-cigarettes is more common. Early indications are that the health effects of dual use are likely worse than using either alone, especially for cardiovascular conditions.¹
- Per the National Academy of Science, Engineering and Medicine, “Overall, there is limited evidence that e-cigarettes may be effective aids to promote smoking cessation (Conclusion 17-1).”²

Sources:
Population-Level Harm Potential (Reduction or Exacerbation) of Electronic Cigarettes

No Tobacco Product Use

Exacerbation

E-Cig Use

Reduction

Combustible Cig Use

Cessation

Gateway/Relapse

Courtesy of Harlan Juster, PhD
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NYS Actions

2013 Legislation
• Defined e-cigarettes
• Must be 18 years old to purchase

2014 Legislation
• Liquid nicotine must be sold in child-resistant containers

2017 Legislation
• E-cigarettes included in the NYS Clean Indoor Air Act (CIAA)
• No e-cigarettes on school grounds
NYS Actions

2019 Legislation

• Raise minimum legal age to purchase tobacco products, including e-cigarettes, from 18 to 21 (Effective 11/13/19)

• E-cigarette retail registration with the Dept of Tax and Finance (Effective 12/1/19)

• Tax on e-liquid vapor products at 20% of retail price (Effective 12/1/19)
NYS Actions

- **August 15** – Health Advisory sent to healthcare, substance use and mental health communities, and local health departments about vaping-associated pulmonary illness

- **September 6** – Public notification about vaping-associated pulmonary illness
NYS Actions

• September 9
  
  o Passed emergency regulations requiring entities in NYS that sell vaping products to post signage on the dangers of vaping illegal e-cigarette and e-liquid products
  
  o Issued subpoenas to three companies that the DOH identified as marketing thickening agents to companies that manufacture vape liquids
NYS Actions

• September 12
  o Issued Executive Order directing:
    • State agencies to include e-cigarette prevention within all tobacco prevention and cessation programs and materials
    • DOH to work with SED to develop and deploy e-cigarette prevention measures for schools to include in their curriculums.
  o Signed legislation to expand current school-based programs and marketing campaigns on tobacco prevention to include e-cigarettes
NYS Actions

• **September 15**
  o Governor Cuomo proposed a ban on the sale of flavored e-cigarettes in NYS which the Public Health and Health Planning Council (PHHPC) voted to enact at 9/17/19 meeting.
  o Directed State Police and DOH to immediately partner to ramp up enforcement efforts against retailers who sell to minors.
  o Will advance legislation to ban deceptive marketing of e-cigarettes to teens and children.

• **September 17**
  o PHHPC approved emergency regulations to ban the sale of e-cigarette flavors, excluding nicotine and menthol. Enforcement delayed by temporary restraining order.

• **September 26**
  o Governor Cuomo accepted the State Health Commissioner’s recommendation to also include menthol flavor in the ban.
Other Activities Underway

• Launched an e-cigarette media campaign. (Link: School)
• Partnering with the Truth Initiative to launch their text-to-quit program for youth and young adults.
• Expanded Quitline services to offer NRT to individuals who vape.
• Released a new funding opportunity of more than $16 million over the next five years to:
  o Support contracts in 9 regions across New York State and one statewide Center for Health Systems Improvement
  o Improve the delivery of health care services to help smokers and vapers quit
  o Address emerging nicotine delivery products
Thank you!

Questions?