Bedford Community Forum on the Vaping Epidemic

Sponsored By:
Vaping, Juul and E-Cigarettes: A Public Health Crisis

James M. Flynn, MD, FACC, FSCAI
CMC, Director of Interventional Cardiology
President, NH Chapter of the American Heart Assoc.
What is Vaping?

Inhaling vapor created by an electronic cigarette or other vaping device
What is Juul?

- Slim USB flash drive design
- Appealing vibrant colors and flavors
- Low vaping “cloud” - discreet use
Nicotine

- Chemically classified as an insecticide
- Particularly harmful to adolescent brain
- Each Juul pod has as much nicotine as a 20 pack of cigarettes
- 63% of Juul users were unaware it always contains nicotine
'I was non-stop Juuling up a storm': 10 college students on their vaping addictions

Updated 11:18 AM EDT, Sun September 15, 2019

Vapers seek relief from nicotine addiction in – wait for it – cigarettes

“Juul made my nicotine addiction a lot worse,” one user said.

High School Vape Culture Can Be Almost As Hard To Shake As Addiction, Teens Say

ELLY YU · OCTOBER 14, 2019

U.S. teens’ use of e-cigarettes has doubled since 2017, according to the National Institute on Drug Abuse. (Tony Dejak/AP)
Myths of Vaping

- It does not contain nicotine
- It is approved for smoking cessation
- It is healthier than smoking
Vaping Induced Pulmonary Disease

Not even known in June 2019

Cobalt Toxicity
Additional Health Risks

- Direct toxic effects (nausea, dry cough, headaches, etc.)
- Cardiovascular disease
- Heart attacks
- Depression
Recent History

Cigarette Smoking Prevalence

- 8th Grade
- 10th Grade
- 12th Grade

JUUL sales as a percentage of all e-cigarette sales

- August 2017: 24%
- March 2018: 50%
- October 2018: 75%

Pre-Juul

Nearly 75% market share in 2019
- E-cigarettes harsh on throat
- Juul added chemical to make it non-irritating
Big Tobacco Invested $12.8 Billion in Juul in 2018

15-16 Year olds are 16x more likely to use Juul

Juul pods have the highest amount of nicotine allowed - 59 mg/ml - on the market
Withdrawal

- Craving for cigarettes
- Dysphoria/depressed mood
- Sleep disturbances
- Irritability and anger
- Anxiety
- Difficulty Concentrating
- Restlessness
- Increased Appetite

Poisoning

- Eye irritation
- Blurred Vision
- Vomiting
- Sweating
- Abdominal Pain
- Increased Heart Rate
- Lack of Coordination
Safety Issues

- Explosion and burn injuries
- Poisoning from liquids in pods in children <6 years old
E-Cigarette ads reach nearly \textbf{4 in 5} U.S. Middle and High School Students.
Costs

Monetary

Health

Safety
Action

National Level
- Research
- Policies
  - FDA
- Organizations, e.g., AHA, CDC

Community/Local Level
- Raise awareness
- Educate
  - Teachers
  - Administration
  - Parents/Caregivers
  - Students
- Online presence
Talk with your Kids

- Don’t wait to talk
- Look for discussion opportunities
- Ask your children what they think
- Be open
- Be patient and ready to listen

Discussion is more powerful than you think
Vaping Education at McKelvie

Red Ribbon Week

Health Class

Principal Notes
Vaping in Health Curriculum

● Grade 5 primarily covers tobacco and some vaping

● Grade 6 covers vaping in more depth

○ Videos:
  ■ Juuling and Vaping: What the Latest Research Reveals
  ■ Everything You Need to Know about E-Cigarettes, Vaping and Hookahs
  ■ Vaping: More Dangerous than you think

● Student Research Slide Project
Vaping, JUULing, & E-Cigarettes!

By Katie Sturgis
What is JUUL?

- Shaped like a USB flash drive. JUUL is a battery-powered device that heats a nicotine-containing liquid to produce an aerosol that is inhaled.
- Have a high level of nicotine. A single JUUL pod contains as much nicotine as a pack of 20 regular cigarettes.
- One of a few e-cigarettes that use nicotine salts, which allow particularly high levels of nicotine to be inhaled more easily and with less irritation than the free-base nicotine that has traditionally been used in tobacco products.
What are E-Cigarettes?

- Electronic devices that heat a liquid and produce an aerosol, or mix of small particles in the air.
- Come in many shapes and sizes.
- Most have a battery, a heating element, and a place to hold a liquid.
- Look like regular cigarettes, cigars, or pipes. Some look like USB flash drives, pens, and other everyday items.
- Also known as “e-cigs,” “e-hookahs,” “mods,” “vape pens,” “vapes,” “tank systems,”
- Using an e-cigarette is sometimes called “vaping” or “JUULing.”
How E-cigarettes Work

- Produce an aerosol by heating a liquid that usually contains nicotine, flavorings, and other chemicals that help to make the aerosol.
- The liquid used in e-cigarettes often contains nicotine and flavorings. This liquid is sometimes called “e-juice,” “e-liquid,” “vape juice,” or “vape liquid.”
- Users inhale e-cigarette aerosol into their lungs. People near them can also breathe in this aerosol when the user exhales it into the air.
- Can be used to deliver marijuana and other drugs.
Why is nicotine unsafe for kids, teens and young adults?

- Contain nicotine. Nicotine is highly addictive and can harm adolescent brain development, which continues into the early to mid-20s.
- Some have labels that say 0% nicotine but those e-cigarettes end up having at least 97% nicotine.
- Nicotine can harm a developing brain under the age of 25.
- Recently states have started to ban vaping products because of there have been several deaths linked to vaping.
E-cigarettes

Did you know?

- NOT risk free
- Contains nicotine, a highly addictive drug known for health risks.
- NOT a way to quit smoking regular cigarettes.
- Affects brain development and functioning in early adults.
- Just if not more, addicting than regular cigarettes.
Anti-Vaping Education at Lurgio Middle School

Educating students about the dangers of vaping
Health Curriculum

7th Grade Units
- CDC based anti-vaping unit

8th Grade Units
- Science of Drug Addiction
- Dangers of Addiction (including vaping)
Events

● Red Ribbon Week
● Stand By Me
● Speakers
  ○ LADC (Licensed Alcohol & Drug Counselor)
  ○ SRO (School Resource Officer)
  ○ Massachusetts College of Pharmacy and Health Science
  ○ Victoria Kirby, APRN
Vaping Education at BHS

Wellness II Curriculum

- Introduce the products
- Talk about the ingredients
- HS usage (using national data vs. Bedford, from YRBS)
- Health risks, evidence informed curriculum through Stanford Medicine (updated annually)
- New legal information and why they are banning use
Category: Tobacco Use - Behaviors
Number and Percent of students who currently used an electronic vapor product on at least 1 day during the past 30 days

**School**
18.2%
272 of 1,387 students*

**Region**
21.3%
1,349 of 6,329 students+

**NH**
23.8%
12,319 of 51,733 students+

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Notes:
* School results are calculated using non-scientific survey data. Numbers of students of the question are adjusted to enrollment data.
+ Region and state results are calculated and weighted using the CDC scientific survey sample. Caution should be used when comparing the school results.
§ To protect confidentiality the data have been suppressed. Cells are suppressed when the denominator is less than 60 students or when the numerator is between 1 and 4 students for sex and grade. Numerators that are zero not not suppressed.
Category: Tobacco Use - Behaviors
Number and Percent of students who ever used an electronic vapor product one or more times during their life

**School**
- 28.2%
  - 421 of 1,415 students*

**Region**
- 39.3%
  - 2,600 of 6,609 students+

**NH**
- 41.1%
  - 22,080 of 53,722 students+

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**Notes**
- *: School results are calculated using non-scientific survey data. Numbers of students responding to question are adjusted to enrollment data.
- +: Region and state results are calculated and weighted using the CDC scientific survey sample. Caution should be used when comparing the school results.
- #: To protect confidentiality the data have been suppressed. Cells are suppressed when the denominator is less than 60 students or the numerator is between 1 and 4 students for sex and grade. Numerators that are zero not not suppressed.
Events

● “Vaping Unveiled” - hosting monthly presentations through Breathe NH
● Red Ribbon Week (October)
● Mini Health Fair (February)
● National Prevention Week (May)
● Vaping Focus Group
● For BHS Staff
  ○ Staff meeting showing vaping paraphernalia
  ○ Vaping breakout during Future Ready conference (October)
Legal Changes

States Regulation Changes

○ Flavor cartridges: Michigan, New York, Rhode Island

○ All products: Massachusetts until 1/2020

○ Age restriction: California (21 yo)
Thank You to Our Presenters and Sponsors!

- James Flynn, MD
- Schools - McKelvie, Lurgio, BHS
- SRO, Officer Nightingale
Resources

CDC


Surgeon General

https://e-cigarettes.surgeongeneral.gov/
Resources

American Academy of Pediatrics


Other

http://www.scholastic.com/youthvapingrisks/

https://www.breathenh.org/
Resources - To Quit Vaping

https://teen.smokefree.gov/

http://makesmokinghistory.org/dangers-of-vaping/help-youth-quit/