Vaping: The New Youth Epidemic
Speakers

• Taylor Reine
  • Youth Prevention Manager
  • Well-Ahead Louisiana

• Alissa Jordan
  • Cessation Manager
  • Well-Ahead Louisiana
Learning Objectives

At the end of this training, participants will be able to:

• Describe emerging trends in e-cigarette use among youth.
• Understand the most common reasons youth use e-cigarettes.
• Define e-cigarettes.
• List the physiological and cognitive effects of e-cigarette use.
• Identify cessation resources for youth and healthcare providers.
• Utilize the “ask, advise, refer” method.
E-CIGARETTE USE AMONG LOUISIANA YOUTH
Surge in E-Cigarette Use Among Youth


- **Middle School**
  - 2015: 4.8%
  - 2017: 8.6%
  - 2019: 15.4%

- **High School**
  - 2015: 9.1%
  - 2017: 12.3%
  - 2019: 31.6%
E-Cigarette Use Among Youth (2019)

Perceived Harm of Electronic Vapor Products

<table>
<thead>
<tr>
<th>Perception</th>
<th>Middle School</th>
<th>High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>More Harmful</td>
<td>23.6%</td>
<td>25.7%</td>
</tr>
<tr>
<td>Equally Harmful</td>
<td>20.2%</td>
<td>22.9%</td>
</tr>
<tr>
<td>Less Harmful</td>
<td>19.5%</td>
<td>29.4%</td>
</tr>
<tr>
<td>Not Sure</td>
<td>31.2%</td>
<td>27.5%</td>
</tr>
</tbody>
</table>
E-Cigarette Use Among Youth (2019)

Reason Students Use Electronic Vapor Products

<table>
<thead>
<tr>
<th>Reason</th>
<th>High School</th>
<th>Middle School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friend or Family…</td>
<td>36.8%</td>
<td>45.2%</td>
</tr>
<tr>
<td>Other</td>
<td>28.2%</td>
<td>30.4%</td>
</tr>
<tr>
<td>Flavors</td>
<td>14.2%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Less Harmful</td>
<td>14.8%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Cessation</td>
<td>10.9%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Indoor Use</td>
<td>6.1%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Cheaper</td>
<td>4.6%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Easy to Obtain</td>
<td>3.9%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Famous People Use</td>
<td>2.8%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Other</td>
<td>2.9%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>
WHAT ARE E-CIGARETTES?
What Are E-Cigarettes?

E-Cigarettes are battery-powered devices that deliver nicotine, flavorings, and other ingredients to the user.
Technical Composition

Parts of a Juul

- E-liquid pod cover
- E-liquid pod
- Heating element (heats solution, aerosolizing nicotine)
- Mouthpiece
- Rechargeable battery

Parts of a Vape Pen

- Rechargeable battery
- Power button (to start vaping)
- Atomizer / Heating element (heats solution, aerosolizing nicotine)
- Mouthpiece
- E-liquid tank (refillable e-liquid nicotine tank)
E-Cigarette Aerosol and Flavors

- Volatile organic compounds
- Ultrafine particles
- Nicotine
- Cancer-causing chemicals
- Heavy metals such as nickel, tin, and lead
- Flavoring such as diacetyl, a chemical linked to a serious lung disease
JUUL and Emerging Products

• JUUL
  • Small and easy to hide
  • Most popular e-cigarette among youth
  • Referred to as “JUULING”

• Heated Tobacco
  • IQOS or Eclipse
  • Not approved by the FDA

• Disposable E-Cigarettes
  • Flavor restrictions do not apply
  • Puff Bars or blu
What are the Risks?
More Than The Listed Ingredients

- Propylene glycol
- Glycerin
- Flavorings (many)
- Nicotine
- NNN
- NNK
- NAB
- NAT
- Ethylbenzene
  - **Benzene**
    - Xylene
    - Toluene
    - Acetaldehyde
    - Formaldehyde
    - Naphthalene
    - Styrene
    - Benzo(b)fluoranthene
- Chlorobenzene
- Crotonaldehyde
- Propionaldehyde
- Benzaldehyde
- Valeric acid
- Hexanal
- Fluorine
- Anthracene
- Pyrene
- Acenaphthylene
- Acenaphthene
- Fluoranthene
- Benz(a)anthracene
- Chrysene
- Retene
- Benzo(a)pyrene
- Indeno(1,2,3-cd)pyrene
- Benzo(ghi)perylene
  - **Acetone**
    - Acrolein
    - Silver
    - Nickel
    - Tin
    - Sodium
    - Strontium
    - Barium
    - Aluminum
    - Chromium
    - Copper
    - Selenium
  - **Arsenic**
    - Nitrosamines
    - Polycyclic aromatic hydrocarbons
- Cadmium
- Silicon
- Lithium
- Lead
  - Magnesium
  - Manganese
  - Potassium
  - Titanium
  - Zinc
  - Zirconium
  - Calcium
  - Iron
  - Sulfur
  - Vanadium
  - Cobalt
  - Rubidium
The Dangers of Nicotine

- Nicotine is a chemical that is responsible for **addiction**
  - Quickly absorbed into your body and goes directly to your brain
- Dangerously addictive and harmful to a developing brain
  - Most teens do not know e-cigarettes contain nicotene
  - Declared teen vaping an epidemic in 2018
Nicotine Comes In Different Forms

Nicotine Salts
- E-cigarettes
  - Alkaline or basic
    - Smooth on throat

Free Base Nicotine
- Combustible cigarettes
- Volatile
- Harsh on throat
Recipe for Increasing Addictiveness

- Flavors
- Menthol
- Sugars
- Nicotine
- Ammonia
- Added Chemicals
Nicotine and Addiction

• Signs of addiction
  • Cravings, or feeling like you really need to use tobacco
  • Going out of your way to get tobacco
  • Feeling anxious or irritable
  • Continuing to use tobacco because you find it hard to stop

• Why is it dangerous?
  • Becoming a cigarette smoker
  • Lifelong tobacco user
  • Developing other addictions
Physiological Effects

- Lung inflammation
- Cardiovascular risks
- Reproductive Health
- Bronchiolitis obliterans
- Lung epithelial cell injury

Unknown Long-Term Effects

Dual Use: Heart and Lung Risks
Cognitive Effects in Youth

• Youth are attracted to the pleasurable effects of nicotine
• Long term use impairs
  • Memory
  • Learning
  • Concentration
  • Emotional processing
  • Impulse control
• Nicotine primes the brain for future addition
  • Gateway effect
Additional Risks

Poisonings
Swallowing, breathing, or absorbing e-cigarette liquid through skin or eyes

Fires/Explosions
Defective e-cigarettes batteries can cause fires and explosions.

Other Substances
E-cigarette device accessories are designed for vaporizing other substances.
THC and Vaping

- **Brain**
  - Affects learning, memory, and coordination
  - Linked with depression, anxiety, and schizophrenia
  - High rates of addiction and dependence

- **Self Control**
  - Impacts sense of time and coordination

- **Lungs**
  - Marijuana smoke deposits 4X more tar in the lungs
  - Contains up to 70% more cancer-causing substances

- **Not always what it seems**
  - Marijuana can be laced with other substances
E-Cigarette or Vaping Product Use-Associated Lung Injury (EVALI)

- **2019 Outbreak**
  - Linked to THC and Vitamin E acetate containing products

- **Symptoms**
  - Cough, shortness of breath, chest pain
  - Nausea, vomiting, abdominal pain, or diarrhea
  - Fever, chill, or weight loss

- **Next Steps**
  - Ask about e-cigarette use and types of substances used
  - Report cases to LDH

- **Additional Resources**
  - [Interim guidance for EVALI treatment](#)
  - [Discharge readiness checklist](#)
  - [ICD 10 coding guidelines](#)
SCREENING, TREATMENT AND RESPONSE
Working With Adolescents

- Maintain Confidentiality
- Assess Knowledge
- Ask Permission
- Discuss Risks and Harms
- Listen and Support
- Avoid Lecturing
Ask-Advise-Refer: Youth Guidance

- **Ask** every patient about tobacco use at every visit
- Helpful strategies to complete a vaping screening:
  - **Ask about:**
    - Behaviors and not labels
    - E-cigarette use separately and directly
    - If they use the same device each time
    - Nicotine concentration
    - If they use replaceable cartridges/pods or refill their device
    - Other substances
- Keep it simple
Ask-Advise-Refer: Youth Guidance

• **Advise** quitting
  • Advice should be clear and personalized
  • Provide a supportive message

• Former combustible cigarette users/dual users
  • Congratulate them
  • Discuss short term effects
  • Discuss the unknown long term effects from vaping

• Encourage setting a quit date
• Recommend counseling and NRT
Ask-Advise-Refer: Youth Guidance

- **Refer** directly to the Louisiana Tobacco Quitline (1-800-QUIT-NOW)
  - Referrals can be made via fax or email directly to the Quitline

- **The Quitline offers:**
  - Behavior change coaching and connection to nicotine replacement products
  - An appropriate resource for all tobacco product quit support

- Refer to local individual or group cessation counseling
CESSATION RESOURCES FOR YOUTH
Live Vape Free

• Louisiana Tobacco Quitline
  • Youth Cessation Platform
    • Vape specific
  • Free for youth ages 13-17
• Text message coaching
  • Personalized and interactive
  • Tools and guidance to quit
  • Access to a quit coach at any time
• Text VAPEFREE to 873373 enroll
• Visit quitwithusla.org to learn more
The Louisiana Tobacco Quitline
1-800-QUIT-NOW

• Youth Support Program
  • Youth tobacco users
    • All types of tobacco products
    • Ages 13-17
  • Telephone and web-based coaching
    • 10 sessions
  • All sessions with the same Quit Coach
    • Trained in youth support
  • www.quitwithusla.org
HEALTHCARE PROVIDER RESOURCES
Tobacco Intervention Trainings

• Louisiana tobacco intervention trainings:
  • Electronic referral system
    • Connect2Quit referral program
  • Healthcare provider trainings
    • Brief Tobacco Intervention training
    • Connect2Quit training
  • Continuing education credits
  • Trainings available at: https://wellaheadla.com/prevention/tobacco/tobacco-education-and-training/
Contact Information

• Well-Ahead Louisiana
  • www.wellaheadla.com
  • wellahead@la.gov

• Quit With Us, Louisiana
  • www.quitwithusla.org
  • quitwithus@la.gov

• Taylor Reine
  • Taylor.Reine@la.gov

• Alissa Jordan
  • Alissa.Jordan@la.gov
Join the Provider Education Network!

• The Provider Education Network provides tools, training and technical assistance opportunities that help you provide the best possible care to your patients and help make every angle of your facility more effective.

• Join today at www.wellaheadla.com/join-provider-education-network
CME Credit Information

The AAFP has reviewed Vaping: The New Youth Epidemic E-Cigarette Online Training and deemed it acceptable for up to 1.00 Enduring Materials, Self-Study AAFP Elective credit. Term of Approval is from 10/01/2021 to 10/01/2022. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

AAFP Prescribed credit is accepted by the American Medical Association as equivalent to AMA PRA Category 1 credit(s)™ toward the AMA Physician's Recognition Award. When applying for the AMA PRA, Prescribed credit earned must be reported as Prescribed, not as Category 1.
Thank you for joining us!
Earn Your CME Credit

https://www.surveymonkey.com/r/E-CigaretteTraining