Understanding the Youth Vaping Epidemic

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What we will cover

• Vaping Epidemic - Update
• Big Tobacco & Future of Vaping
• Impact of Youth Use
• Action & Resources
Vaping Epidemic
What is EVALI?

E-cigarette or Vaping use-Associated Lung Injury

- Shortness of Breath
- Fever
- Chills
- Cough
- Vomiting
- Diarrhea
- Headache
- Dizziness
- Rapid Heart Rate
- Chest Pain
- Lung Tissue Damage: X-ray or CT

Image from Radiological Society of North America
CDPH- Weekly EVALI (1/28/2020)

California

- 204 Total Cases
- 4 Deaths
- 30/59 (52%) Counties Reporting
- 25 Median Age
- 62% Male
- 38% Female
- 87 (45%) ICU
  - 16- Ages 0-18
  - 27- Ages 19-26
  - 44- Ages 27+

2,711 + US Cases Reported

https://www.cdph.ca.gov/Programs/CCDPHP/Pages/EVALI-Weekly-Public-Report.aspx
CDC & Lung Health Researchers Still Investigating...

- Strong Link to Vitamin E Acetate & THC/Cannabis
  - Often in THC containing e-cigarettes
- Looking at Other Solvents
  - Propylene Glycol
  - Vegetable Glycerin
- Impact on inhaling solvents is relatively unknown
- Linked Brands- Dank, TKO, Smart Cart & Rove (counterfeit)

California- EVALI Vaping Practices in Last 3 Months:

- Vaped THC- 90 (83%)
- Vaped CBD- 39 (36%)
- Vaped Nicotine- 49 (45%)
- Vaped Nicotine Only- 10 (9%)

CDPH EVALI Weekly Update 1/28/2020
EVOlution of Vaping Devices
2017 JUUL entered the market.
E-Liquid Nicotine Formulation Change

[Diagram showing nicotine molecules labeled as "Freebase" and "Salt"]

Risks to the Developing Brain

- Impacts Prefrontal Cortex
- Nicotine Addiction
- Mood Disorders
- Permanent Lowering of Impulse Control
- Changes Synapses -
  - Control
  - Learning
  - Attention
Nicotine Addiction is HARD to Beat

20% Success Rate
With state-of-the-art counseling and medication

15% Success Rate
With medication and/or counseling

4-5% Success Rate
No quit aids or counseling

Percentages: UCSF Center for Tobacco Control Research and Education
1.5 MILLION
1.5 million *MORE* youth using e-cigarettes in 2018 than in 2017

4.9 MILLION
4.9 million youth were current tobacco users in 2018

38.3%
Use of ANY tobacco product grew by 38.3% among high school students (2017-2018)
Monitoring the Future 2019 Survey

NIH: National Institute on Drug Abuse

**Daily Nicotine Vaping**
Measured for the first time in 2019

<table>
<thead>
<tr>
<th>Grade</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>8th graders</td>
<td>1.9%</td>
<td>2.9%</td>
<td>3.3%</td>
</tr>
<tr>
<td>10th graders</td>
<td>6.9%</td>
<td>9.9%</td>
<td>11.7%</td>
</tr>
<tr>
<td>12th graders</td>
<td>11.7%</td>
<td>13.9%</td>
<td>15.8%</td>
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2019 Past Month Nicotine Vaping Equates to:
1 IN 4 – 12th graders • 1 IN 5 – 10th graders • 1 IN 10 – 8th graders

Monitoring the Future
2019 Survey

NIH: National Institute on Drug Abuse

*2018 – 2019 increase is the second largest one-year jump ever tracked for any substance in the 45-year survey history (nicotine vaping was the largest from 2017 – 2018)

What Are Your School Numbers?

Mammoth Unified School District
E-Cig Use in Last 30 Days Comparison

California Healthy Kids Survey (CHKS) MUSD 2016-2017 & 2017-2018
National Youth Tobacco Survey (NYTS) 2017 & 2018 (FDA & CDC)
Big Tobacco: New Look, Same Tactics
Big Tobacco Knows Adolescence is the Prime Time for Addiction

“Realistically, if our company is to survive and prosper over the long term, we must get our share of the youth market”

— R.J. Reynolds,
Makers of Winston, Camel, Salem
High Teen Exposure to E-Cig Advertising
Stealth Vaping:

- YouTube: 18,200 videos
- JUUL on YouTube yielded = 148,000 videos
  - 57 videos having >100,000 views
- JUUL at school (15, 500)
- JUUL in class (6840)
- Hiding JUUL in school (2,030)
- JUUL in school bathroom (1,040)
juul.ENT #juul #juulmemes #juultricks #juulpods #juulskins #juulianapaiva #juulnation #juuvapor #juulgang #juulcentral #juuls #juuling #doit4juul #doitforjuul #juullife #juulgangshit #juulvape #juulcompatible
Not your mom or dad’s cigarettes
Predatory Marketing
Predatory Marketing - Cannabis Vapes
Goodbye JUUL - So 2019- Hello Puff Bar

WARNING: THIS PRODUCT CONTAINS NICOTINE. NICOTINE IS AN ADDICTIVE CHEMICAL.
Youth & Young Adults are Big Tobacco’s Target

- 90% of tobacco users began before age 18
- 99% began using by the age of 26
- 80% began with a flavored product
Big Tobacco Keeps Pushing $$$$$$$$$$$

Tobacco Industry Influence in CA

9.4 Billion in Marketing Nationwide

590.3 Million Directly Spent on CA Marketing

Source: https://www.tobaccofreekids.org/problem/toll-us/california
Impact of Youth Use: New Generation of Addiction
TEEN E-CIG USERS ARE MORE LIKELY TO START SMOKING.\(^2\)

Start Smoking Within 6 Months

30.7% E-CIG USER
8.1% NON USER

*Includes combustible tobacco products [cigarettes, cigars, and hookahs]

WHAT DO TEENS SAY IS IN THEIR E-CIG?\(^3\)

66.0% Just Flavoring
13.2% Nicotine
13.7% Don't Know
5.8% Marijuana
1.3% Other

Manufacturers don’t have to report e-cig ingredients, so users don’t know what’s actually in them.
California’s Cost of Tobacco Addiction

- Smoking Related Healthcare Costs: $13.29 billion/year
- Loss in Productivity: $10.35 billion/year
- Kids (under 18) who become new daily smokers each year: 9,200

Nicotine Withdrawal Symptoms Impact Education

<table>
<thead>
<tr>
<th>Symptom</th>
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<tbody>
<tr>
<td>Cravings</td>
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<tr>
<td>A Sense of Emptiness</td>
</tr>
<tr>
<td>Anxiety</td>
</tr>
<tr>
<td>Moodiness</td>
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<tr>
<td>Irritability</td>
</tr>
<tr>
<td>Difficulty Focusing or Paying Attention</td>
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<tr>
<td>Depression</td>
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TEENS REPORT REASONS FOR VAPING

- To experiment - to see what it's like
- Because it tastes good
- To have a good time with my friends
- To relax or relieve tension* (increased by more than 1/3)
- To feel good or get high*
- Because of boredom - nothing else to do
- Because it looks cool
- Because I'm "hooked" - I have to have it* (more than doubled)
- To help me quit regular cigarettes
- Because regular cigarette use is not permitted

*Up significantly from 2018

Youth Vaping Cessation Issues

- Lack of Youth Centered, Vaping Focused Cessation Materials
- GPs and Pediatricians struggling to find right nicotine replacement dosage
- Nicotine Replacement technically not approved for “under 18”
- Cannabis adds another layer to addiction and use
Action & Resources
September 2019 GOVERNOR SIGNS
VAPING EPIDEMIC EXECUTIVE ORDER

• Address illegal & counterfeit vaping products in stores
• Include nicotine content in tax calculation
• Public awareness campaign – tobacco & cannabis
• CDPH to recommend retailer and package warning signs
• Increase enforcement
• Stricter age verification requirements
National Level

- December 2019-21 is now the new Legal Age to purchase tobacco/e-cigs across US
- 2019 JUUL Pulls Fruit and Mint Products
- Altria Takes a $4.1 Billion Hit from JUUL Investment
- FDA to Enforce Marketing Laws
- Manufacturers to File FDA Application by May 12
- FDA Bans Flavored E-cig Products...
  - Fruit/Dessert/Mint Flavored Cartridges
  - Menthol/Tobacco Cartridges- OK
  - Tank Based Systems- OK
  - Non-refillable/No Cartridge- OK
School Specific Considerations

- Have a clear, current & legally vetted school policy on tobacco use
- Highlight policy in enrollment packet- Parent & Student Signatures
- Clearly identify & enforce tobacco free campus
- Work with partners to inform School Boards
- Youth Voice- Involve youth to impact change
- Provide cessation resources/incentives for staff
Coordination & Collaboration

• Get Involved with TUPE Coordinator
• Work Together to Reframe Social Norms
• Coordinate Messaging
• Participate in Coalition
• Tobacco Control/County Public Health = Resource
• Free educational resource
• Theory-based & evidence-informed
• Tobacco/nicotine & marijuana prevention
• Middle and high school students

Stanford Tobacco Prevention Tool Kit
CATCH My Breath

Free Evidence-Based E-Cig Curriculum
Effective for Middle School Aged Youth
Student Centered Learning

University of Texas Science Center at Houston (UTHealth) School of Public Health

CATCH.org
smokeSCREENgame.org

Yale Center for Health & Learning Games

Teens Ages 10-16

Web-based video game focused on the prevention of tobacco use in youth
Quit Apps
- No Butts- California Smokers’ Helpline
- quitStart- National Cancer Institute
- This is Quitting- Truth Initiative

Texting Quit Help
- California Smokers’ Helpline
- smokefreeTXT- CDC
- On Demand Support- CDC

Phone Counseling
- 1-800-NO-BUTTS- California Smokers’ Helpline
Online Resources

- CDC
  - cdc.gov
- National Institute on Drug Abuse
  - drugabuse.gov
- California Department of Public Health
  - cdph.ca.gov
- Tobacco Free CA
  - tobaccofreeca.com
- Flavors Hook Kids
  - flavorshookkids.org
- American Lung Association
  - lung.org


Ramamurthi D, Chau C, Jackler RK. JUUL and other stealth vaporisers: hiding the habit from parents and teachers. Tobacco Control Published Online First: 15 September 2018. doi: 10.1136/tobaccocontrol-2018-054455


THANK YOU!
Questions?

“With mysterious lung illnesses and deaths on the rise, we have to educate our kids and do everything we can to tackle this crisis.”

— Governor Newsom, September 2019

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