Vaping: What you need to know
Youth Leadership Institute

- Works with youth 13-24 years old to build youth leadership development, engage in youth-led research, and educate decision makers to shape and change communities at the policy level.

- 26 years, 7 offices in California
This presentation will cover the topic from a public health and youth-centered lens.

Yes, it is:

- Educational
- Evidence-based
- Focused on young people

It is not:

- Supporting legislation
- Able to answer all questions
- Discouraging medical marijuana use
Social Determinants of Health

**Societal**
Culture, historical trauma, norms and access, socioeconomic status, media, laws and policies

**Community**
Faith-based institutions, schools, workplaces, neighborhoods

**Relationship**
Peers, parents, teachers

**Individual**
Stress, strategies for coping with stress, impulsive behaviors
SHARE OUT:

What do you know (or think you know) about vaping?

What do you want to know?
Today’s Issue: Vaping

- Basics: What is vaping?
- What do these products look like?
- Health impacts
- What about cannabis and vaping?
- What can we do?
The Basics

- E-cigarettes & vapes are designed to deliver nicotine, flavorings, and other additives to the user via an inhaled aerosol. They can also be used with cannabis.
- Since 2014, they have been the most commonly used tobacco product among U.S. youth.
- Most e-cigarettes contain nicotine – the addictive drug in regular cigarettes, cigars, and other tobacco products.
What do these products look like?
600% surge in JUUL sales from 2016 to 2017
Phix
Suorin

Suorin Vagon
View All

Suorin Drop
View All

Suorin Air
View All
1 in 5 high school students & 1 in 20 middle school students currently use e-cigarettes.

E-cigarette use among U.S. middle and high school students increased 900% during 2011-2015.

Source: National Youth Tobacco Survey 2011–2018
Notes: In 2014, changes were made to the e-cigarette measure to enhance its accuracy.
<table>
<thead>
<tr>
<th></th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A whole cigarette</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 times</td>
<td>96</td>
<td>93</td>
<td>93</td>
<td>88</td>
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<tr>
<td>1 time</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
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<tr>
<td>2 to 3 times</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>4 or more times</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>6</td>
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<tr>
<td><strong>Smokeless tobacco</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 times</td>
<td>98</td>
<td>97</td>
<td>97</td>
<td>95</td>
</tr>
<tr>
<td>1 time</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2 to 3 times</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4 or more times</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>An electronic cigarette or other vaping device</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 times</td>
<td>85</td>
<td>77</td>
<td>72</td>
<td>66</td>
</tr>
<tr>
<td>1 time</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2 to 3 times</td>
<td>4</td>
<td>4</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>4 or more times</td>
<td>7</td>
<td>14</td>
<td>16</td>
<td>22</td>
</tr>
</tbody>
</table>

Question HS A.46-48/MS A.47-49: During your life, how many times have you used the following? A whole cigarette... Smokeless tobacco (dip, chew, or snuff)... Electronic cigarettes, e-cigarettes, or other vaping device such as e-hookah, hookah pens, or vape pens.

Notes: Cells are empty if there are less than 10 respondents.
| 1 pack cigarettes | 20 cigarettes  
(contains 8mg per cigarette, 
but only inhale 1mg) |
|-------------------|-------------------|
| 1 JUULpod         | 0.7 mL pod  
"5% nicotine by volume" |
| 1 PHIX pod        | 1.5 mL pod  
"5% nicotine by volume" |
| 1 Suorin pod      | 2 mL cartridge  
"5.4% nicotine by volume" |
Flavored Products

Many vaping device products come in kid-friendly flavors (such as cartridges, juices/liquids).

In addition to making e-cigarettes more appealing to young people, some of the chemicals used to make certain flavors may also have health risks.

Why add flavors?
- Less odor
- Mask harshness of tobacco and/or marijuana and allow user to inhale more product
- Easy to conceal
- Appeal to youth
Flavored Products Can Be Toxic!

Cinnamon flavors may contain:
Cinnamaldehyde, 2-Methoxycinnamaldehyde

Cherry flavors may contain: Benzaldehyde
Popcorn Lung

Alveoli & Bronchioles Experience scarring
So, what else is in e-cigs/vape pens?

- 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)perylenel
- Acetone
- Acrolein
- Silver
- Nickel
- Tin
- Sodium
- Strontium
- Barium
- Aluminum
- Chromium
- Boron
- Copper
- Selenium
- Arsenic
- Nitrosamines,
  Polycyclic aromatic hydrocarbons
- Cadmium
- Silicon
- Lithium
- Lead
- Magnesium
- Manganese
- Potassium
- Titanium
- Zinc
- Zirconium
- Calcium
- Iron
- Sulfur
- Vanadium
- Cobalt
- Rubidium
Where Else Can You Find These Chemicals?

Propylene glycol ➔ Antifreeze

Acetone ➔ Nail Polish Remover

Ethylbenzene ➔ Paints, Pesticides

Formaldehyde ➔ Embalming

Nicotine ➔ Cigarettes

Rubidium ➔ Fireworks
Cannabis & Vaping

Vaping devices are targeting youth and not just being used for nicotine – they are also being used to vaporize THC often through cannabis-infused oils or dried herb in place of e-liquids.
Cannabis: The Basics
Cannabis

- As you can see from the image, cannabis/marijuana is a mixture of green, brown/gray. Scientifically known as cannabis sativa.
- Known as different names (e.g. pot, herb, weed, kush, marijuana)
- Commonly inhaled through smoking (bong, pipe, rolled joint) or inhaling through a vaporizer (aerosol)
Breaking it down: THC vs CBD

Cannabis contains tetrahydrocannabinol (THC), which is a chemical that changes different parts of the mind and mood. Cannabidiol (CBD) is another chemical in cannabis that does not affect your mood, and compensates for the effects THC causes (like anxiety and paranoia).
TYPES OF CANNABIS

Food or liquid

- Potency is measured in milligrams of CBD or THC
- Often marketed towards young people

Dab, budder, shatter, wax oil

- High potency: includes 50-90% of concentrated THC
- High THC level led to increased emergency room visits

Pill, patch or tincture

- Usually for medical use
- High CBD potency, with little to no THC
Must be 21+ to purchase recreational cannabis
18+ for medical cannabis
Average THC & CBD in U.S.: 1960-2011

Today's cannabis is 4-6 times more potent than what it was 20 years ago (depending on product).
Driving under the influence of Marijuana can be lethal

- Marijuana affects reaction and judgement
- After alcohol, marijuana is the drug connected to car collisions, including those involving death
- Drivers with active THC in their blood involved in a fatal car accident have increased 22% from 2010 to 2014. (Washington State Traffic Safety Commission)

In 2013 nationwide, 62.6% of the fatally-injured drivers were tested for drugs.

Of those tested:

- 30.3% A drug in the FARS list was found
- 34.7% Marijuana
- 9.7% Amphetamine
- 57.3% No drugs detected
- 4.6% Unknown

2013 Data from the US Department of Transportation, National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS).
Cannabis is addictive

In 2014, 4.2 million people 12 and older had a cannabis abuse or addiction problem. 30% of people that use cannabis can become addicted to the drug. People that started using before 18 years old are 4-7 times more likely to develop addiction to the drug than starting as an adult (25+).
Cannabis & Mental Health

THC can exacerbate psychotic symptoms and worsen outcomes in patients already diagnosed with schizophrenia or other psychotic disorders.

Several large observational studies also strongly suggest that using cannabis particularly in the early teenage years can increase risk of developing psychosis.

Regular use of cannabis has also been linked to depression, anxiety, and a lack of drive or motivation.
<table>
<thead>
<tr>
<th>Substance</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>18</td>
<td>26</td>
<td>38</td>
<td>50</td>
</tr>
<tr>
<td>Marijuana</td>
<td>13</td>
<td>21</td>
<td>29</td>
<td>37</td>
</tr>
<tr>
<td>Inhalants</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Cocaine, Methamphetamine, or any amphetamines</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Heroin</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ecstasy, LSD, or other psychedelics</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Prescription pain killers, Diet Pills, or other prescription stimulant</td>
<td>8</td>
<td>9</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Cold/Cough Medicines or other over-the-counter medicines to get “high”</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Any other drug, pill, or medicine to get “high”</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Any of the above AOD use</td>
<td>26</td>
<td>34</td>
<td>45</td>
<td>55</td>
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<tr>
<td>Any illicit AOD use to get “high”^</td>
<td>23</td>
<td>32</td>
<td>43</td>
<td>54</td>
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Notes: Cells are empty if there are less than 10 respondents.

^Excludes prescription pain medication, Diet Pills, and prescription stimulant.
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<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol (one full drink)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 times</td>
<td>82</td>
<td>74</td>
<td>62</td>
<td>50</td>
</tr>
<tr>
<td>1 time</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>6</td>
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<tr>
<td>2 to 3 times</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>4 or more times</td>
<td>6</td>
<td>13</td>
<td>21</td>
<td>35</td>
</tr>
<tr>
<td>Marijuana (smoke, vape, eat, or drink)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 times</td>
<td>87</td>
<td>79</td>
<td>71</td>
<td>63</td>
</tr>
<tr>
<td>1 time</td>
<td>4</td>
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<td>4</td>
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<td>2 to 3 times</td>
<td>3</td>
<td>5</td>
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</tr>
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<td>4 or more times</td>
<td>6</td>
<td>11</td>
<td>19</td>
<td>27</td>
</tr>
</tbody>
</table>
So, what can we do?

- Talk to your local City Council
- Educate yourself and others on the potential harms
- Join the San Mateo County Tobacco Education Coalition

County of San Mateo Board of Supervisors Bans Flavored Tobacco Sales

Posted by Michelle Durand on Jun 5th 2018

The San Mateo County Board of Supervisors voted 5-0 in favor of banning the sale of flavored tobacco products at pharmacies and retailers in the unincorporated areas of the county as a way to promote community health, particularly among youth.

If approved by a second reading at the next Board meeting, the ordinance takes effect within 30 days but enforcement by the Health System will not start until Jan. 1, 2019. Violators may be fined or have their tobacco retailer permit revoked.

The Board voted unanimously at the June 5, 2018, meeting after hearing from more than two dozen public speakers. Many speakers asked the Board to support a ban, pointing out its marketing tactics targeting youth, minority populations and marginalized communities with colorful advertising and appealing candy flavors.
Contact

Lalo Gonzalez
egonzalez@yli.org

Smitha Gundavajhala
sgundavajhala@yli.org
HOW TO TALK WITH YOUR STUDENT ABOUT VAPING

Get Their Perspective

• Instead of leading with facts, start with genuine curiosity

• Setting judgments aside

• Find out what they already know and think about vaping

  (1) This shapes how the rest of the exchange will go

  (2) Increases the odds that they’ll want to hear what you know

To get our student to take concerns about vaping or anything else seriously we should start by recognizing that they have their own first hand observations and experiences that have led them to their own conclusions
HOW TO TALK WITH YOUR STUDENT ABOUT VAPING

Ask Why Before Suggesting Why Not

- Adolescent have their reasons for vaping
- Many are trusting that they are on the shallow end of the pool of drugs and vaping is a quick, discreet, convenient and harmless vehicle of experimenting.
- If we only address the downsides of risky temptations, we will be easily dismissed as “killjoys”
- Acknowledging the allure of vaping
WHAT WE SEE IN WELLNESS?

- Struggling Socially & emotionally
  - Self Medication
  - Experimentation / Curiosity
  - Peer Pressure
  - View of their peers
  - Thrill of defying authority – pushing limits
  - Sample flavors –
    - German Chocolate Beefcake
  - Mesmerized by videos of tricks
HOW TO TALK WITH YOUR STUDENT ABOUT VAPING

Share Your Concerns

• Fact sharing
• Not treating all hazards the same – you will be tuned out!

• Acknowledging that nicotine is highly addictive.
• Big Tobacco own Ecig companies.
• Young people are the target audience.
• Ask! Ask! Ask! What does your student think/feel?
WHAT ARE SOME OF THE RISKS SEEN

• The developing brain of adolescents are more susceptible to addiction
• Vaping solutions, even without nicotine, contain compounds and carcinogens that are toxic
• Metal micro particles have been found to be released by e-cigs when the coils heat that…..

“can put kids at risk for reactive airway disease, asthma, and even emphysema”
HOW TO TALK WITH YOUR STUDENT ABOUT VAPING

Accept That Facts Don’t Go Far

- Good Information doesn't necessarily lead to smart choices, especially initially.
- We all routinely do things they know to be unhealthy (i.e., risky behavior, speeding, eating fast-food, not wearing sunscreen, etc)
- We want to ensure that our teen is working with facts of potential dangers, but we mistakenly think that just giving them knowledge will do the trick!
Accept That Facts Don’t Go Far

**Adult Brain VS Teenage Brain**

**Our Frontal Lobe**
- Judgement
- Decision making
- Reasoning
- Problem solving
- Impulse control
- Emotions and emotion control

**Teenage Frontal Lobe**
- Underdeveloped as the brain matures back to front
- Last the part of the brain to mature (at about 24 years of age; males and females differ)
- This occurs during a time they are trying to form their own identity
HOW TO TALK WITH YOUR STUDENT ABOUT VAPING

Concede the Limits of Your Power

- Duck the power struggle!
- Taking this stance overestimates the amount of control adults have and underestimates a teenager’s autonomy
- Two pronged approach: Articulating expectations & repercussions and acknowledging limits of power
HOW TO TALK WITH YOUR STUDENT ABOUT VAPING

Concede the Limits of Your Power

- “Vaping isn’t harmless, one might say, so I hope you will steer clear of it. That said, I don’t have the power to make this choice for you. It’s something you’ll decide for yourself”

- “If we find out you’re using them, there will be repercussions, such as… ”
OVERALL HOW TO SUPPORT

Creating a Safe Open Space

Discuss at a non Triggering time

Talk with them and not at them!

Non-Judgmental Communication

Lead with empathy

Utilize your support Network

Monitor Reactions

Who Will Listen?
SUPPORT WITHIN OUR SCHOOL DISTRICT

- Vape Awareness Prevention & Education Group (VAPE)
- Substance Use Program (SUP)
- Dr. Jessamy Cadigan, PsyD
  Email: jcadigan@smuhsd.org
  Phone: 650-558-2264
  Makes quit plans
PANELISTS

- Bonnie Halpern-Felsher- PhD, FSAHM  
  *Stanford  Founder & Executive Director, Tobacco Prevention Toolkit*

- Smitha Gundavajhala  
  *Youth Leadership Institute*

- Jessamy Cadigan, PsyD  
  *Mental Health Therapist- SMUHSD, TUPE Grant*

- Don Scatena  
  *Director of Student Services, SMUHSD*

- Mike Nguyen, SRO  
  *Student Resource Officer- SMUHSD, San Mateo Police Department*