INHALING DESPAIR:
Examining the Link Between Vaping and Youth Mental Health
We gratefully acknowledge the support of the California Department of Education Tobacco Use Prevention Education program for this webinar. The contents do not necessarily reflect the position or policy of the CDE.
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Priya Shankar, MD, MPH
(she/her)
Assistant Professor of Pediatrics,
UCSF Benioff Children’s Hospital Oakland
Youth Uprising Castlemont High School
School-Based Health Center
Co-Founder, Adolescent Health Champions
Pragati Kalive (she/her)
Curriculum Design and Mental Health Verticals
Adolescent Health Champions
Youth Mental Health and Vaping
Youth Vaping Trends in the US

The 2022 National Youth Tobacco Survey (NYTS) on e-cigarette use among U.S. youth found that:

- 1 in 10 or more than 2.5 million U.S. middle and high school students used e-cigarettes
- 14.1% (2.14 million) of high school students and 3.3% (380,000) of middle school students reported current e-cigarette use
- More than a quarter (27.6%) of current e-cigarette users use an e-cigarette product every day

An August 2021 survey by the Truth Initiative found that:

- 4 out of 5 of the youth who had used e-cigarettes started vaping to deal with stress, anxiety or depression.
- 1 out of 2 youth vapers use e-cigarettes to deal with stress or anxiety
The COVID-19 pandemic has had a significant impact on mental health and substance use around the world. The measures taken to control the spread of the virus, such as lockdowns, social distancing, and isolation, have had severe effects on individuals' mental well-being and substance use behaviours.
Substance Use, Mental Health and the Pandemic

- Increased Anxiety and Depression
- Substance Use and Addiction
- Impact on Vulnerable Populations
- Disruption of Mental Health Services
WHO’s Data (2020) from across 130 countries

- Over 60% reported disruptions to mental health services for vulnerable people, including children and adolescents (72%), older adults (70%), and women requiring antenatal or postnatal services (61%)
- 67% saw disruptions to counselling and psychotherapy
- More than a third (35%) reported disruptions to emergency interventions and addiction services
- Around three-quarters reported at least partial disruptions to school services (78% respectively)
Why are adolescents more likely to turn to vaping?

1. **Peer Pressure**
   Adolescents may feel pressure to fit in with their friends who vape.

2. **Advertising & Marketing**
   Vaping companies and ‘Big Tobacco’ often use targeted marketing campaigns that appeal to young people.

3. **Lack of Coping Skills**
   Modern life gives us few opportunities to develop healthy coping skills to manage our emotions.

4. **Misinformation**
   There is not enough knowledge about the risks associated with vaping.
Big Tobacco Advertising

Products containing nicotine (cigarettes, vapes) are marketed as stress-relieving products.

Additionally, unlike cigarettes, vaping is not as harsh or dry. It also gives people an instant head rush which is why it is popular amongst young people.

Vapes also come in sweet flavours and attractive packaging.
IT'S A PSYCHOLOGICAL FACT: PLEASURE HELPS YOUR DISPOSITION

How's your disposition today?

FEEL CROSS AS A BEAR? That's natural when little annoyances pile up. But the psychological fact is: pleasure helps your disposition. That's why everyday pleasures, like smoking, for instance, are important. If you're a smoker, you're wise to choose the cigarette that gives you the most pleasure. That means Camel.

For more pure pleasure... have a Camel

As lovely Maureen O'Hara knows, it's wise to choose a cigarette for the pleasure it gives. Because pleasure helps your disposition. And more smokers get more pleasure from Camel than from any other brand! So... have a Camel. You'll agree—no other cigarette is so rich-tasting, yet so mild as Camel!

No other cigarette is so rich-tasting, yet so mild!
The same marketing strategy is now being used by e-cigarette companies.

The popular vape brand Puff Bar during the pandemic marketed its product as a way to “stay sane,” advertising it as “the perfect escape from back-to-back zoom calls, parental texts, and WFH stress.”
1. Nicotine Smoking
2. Nicotine Absorption
3. Arousal, Mood Modulation & Pleasure
4. Tolerance & Dependence
5. Withdrawal
6. Craving

Nicotine Addiction Cycle
Drugs can alter important brain areas that are necessary for life-sustaining functions and can drive the compulsive drug use that marks addiction.
Impact of Drugs on the Brain and Mental Health

- **The basal ganglia**, role in positive forms of motivation, including the pleasurable effects of healthy activities like eating, socializing, and sex, called the brain’s “reward circuit.” **Drugs over-activate this circuit**, producing euphoria. Repeated exposure, diminishes sensitivity and makes it hard to feel pleasure.

- **The extended amygdala**, role in stressful feelings like anxiety, irritability, and unease (often seen in withdrawal after the drug high fades) -> motivates the person to seek the drug again. This circuit becomes increasingly sensitive with increased drug use. Memory can also be impacted.

- **The prefrontal cortex**, important for the ability to think, plan, solve problems, make decisions, and exert self-control over impulses. Shifting balances makes a person with a substance use disorder seek the drug compulsively with reduced impulse control.
How is the brain affected by substance use?

- Neurotransmitter Imbalances
- Structural Changes in the Brain
- Developmental Impacts
- Co-occurring Mental Health Disorders
- Withdrawal and Dependence
Cannabis Vaping

Vaping marijuana is often touted as safer than smoking it and safer than smoking cigarettes or vaping with nicotine products. However, vaping marijuana isn't safe in general, and in some ways, it may be more dangerous.

Marijuana-containing vape products contain concentrated forms of the plant, which means THC levels are many times higher than in the highest-quality marijuana. That makes vaping them especially likely to cause negative side effects or long-term health problems:

- Addiction
- Impaired Brain Function
- Impaired Brain Development
- Poor Mental Health
Video

https://www.youtube.com/watch?v=UNAbf3J3IR0
Vaping and Mental Health

Research conducted on e-cigarette users found several links between vaping and worsening mental health symptoms.

**Anxiety**
Over 60% of vapers reported experiencing anxiety symptoms (such as worries, flashbacks, panic attacks, etc) within the past week, compared to about 40% of participants who had never vaped.

**Sleep Problems**
Nicotine increases heart rate, blood pressure and alertness which makes it difficult to fall asleep and stay asleep.

**Depression**
Over 50% of the vapers reported experiencing symptoms of depression within the past week as compared to 25% of non vapers.

**ADHD**
Adolescents with ADHD are more likely to experiment with nicotine products as an attempt to self medicate for ADHD symptoms.
Vaping: Anxiety and Depression

- Consumption of nicotine is **falsely understood** to have stress-relieving effects
- Nicotine **dysregulates mood / brain function**
- Smokers **experience irritability, anxiety, and depression** when they have not smoked for a while, which are relieved by smoking
- Young people who use vaping as a coping mechanism for depression may **fail to develop healthy coping strategies:** social connection, physical activity, or seeing a mental health professional
Vaping and Sleep

- Nicotine can increase heart rate, blood pressure, and alertness, making it harder to fall asleep and stay asleep.
- Vaping products also contain a variety of chemicals, including flavourings and addictive, that may have unknown effects on sleep.
- Some people may wake up during the night to use their vaping devices which can also interfere with the natural sleep cycle and lead to daytime fatigue and sleepiness.
Vaping and ADHD

Evidence suggests a complex relationship exists between ADHD and smoking with ADHD contributing to smoking but smoking also contributing to the development of attention deficits.

ADHD predicted future smoking and the transition into associated nicotine addiction and adolescents with ADHD were more likely to experiment with cigarettes and become smokers.

Smoking may be an attempt to self-medicate for symptoms of ADHD.

Individuals with ADHD may also be more susceptible to the negative effects of smoking.
Mental Health Benefits of Vaping Cessation

1. Anxiety & Depression
   - Quitting vaping has been associated with the improvement of symptoms of anxiety and depression

2. Improved Sleep
   - Nicotine cessation allows for improved sleep quality and increased appetite

3. Sense of Calm
   - Cessation of nicotine dependence makes people feel more calm and relaxed
The Link Between Vaping and Mental Health: Youth Stories
Only the student can decide if they want to change, but our goal is rapport building!

It's important to create a safe space where youth feel comfortable talking about their addiction and coping strategies and Stages of Change without fear of judgment or punishment.

Educate yourself and others about addiction and coping mechanisms so you can better understand what youth are going through.
THE SYMPTOMS OF DRUG ADDICTION

**Psychological**
- Mental health problems
- Irritable and agitated
- Paranoia and on-edge

**Physical**
- Headaches
- Weight changes
- Disrupted sleep

**Behavioural**
- Secretive behaviour
- Withdrawing from loved ones
- Loss of interest in hobbies
Tips for Talking to Young People

Don’t just have one talk, have many conversations, whenever the opportunity arises at different stages of your child’s development.

- Reflect on what is age appropriate & what your individual child needs
- Create a safe space where youth feel comfortable talking about their addiction and coping strategies without fear of judgment
- Educate yourself and others about addiction and coping mechanisms
- Learn to identify the signs and symptoms of addiction, as well as healthy coping strategies that can help them manage stress, emotions, and triggers.
- Encourage youth to express their thoughts and feelings openly and avoid shaming or blaming language.
- Help them access professional help.
- Help youth develop healthy coping strategies to manage stress and emotions without resorting to addictive behaviors.
- Be patient and supportive: Recovery from addiction and learning healthy coping skills takes time, and there may be several setbacks/relapses along the way. Celebrate their successes, no matter how small.
- Motivate youth to prioritize self-care as part of their recovery process.
- Promote positive peer connections: Encourage youth to surround themselves with positive influences and supportive peers who can help them in their recovery journey. Discourage them from spending time with peers who may enable addictive behaviors or trigger cravings.
- Seek support for yourself: Supporting youth with addiction and coping can be emotionally challenging.
Being an “Askable” Adult

- Listen more than you speak when talking with your teen. Don’t laugh at their questions.

- Don’t be afraid to admit if you are uncomfortable or don’t know the answer. Discomfort is normal! You can look up the answer together.

- Educate yourself by doing your research and referring to reliable sources.

- Think through your own feelings and values so that you feel prepared to talk about them with your teen.

Reference: OUSD Healthy Oakland Teens
What is Motivational Interviewing

- Express Empathy
- Develop Discrepancy
- Roll with Resistance
- Support Self-efficacy
- Develop a Collaborative Partnership

Reference: We Lead Ours (WELO), OUSD Tobacco Use Prevention Education
How to encourage parents to support their child

Parental monitoring includes the ways parents set expectations, keep track of their teens and respond when rules are broken. Here are a few tips:

- Talk with your teen about rules, expectations and consequences. Listen to how they feel.

- Get to know your teen’s friends, and their friends’ parents. Ask where they are going and who will be there.

- Keep track of how your teen spends time online, and talk about using the internet safely.

- Make sure your teen knows how to contact you at all times & that you will always be there for them if they need help.

Reference: Mara Larsen-Fleming, Director Health and Wellness, OUSD
Depending on the substance involved and the individual's particular needs, there are many treatment options available for addiction.
Common Methods of Addiction Treatment

- Detoxification
- Behavioural Therapies
- Medication
- Support Groups
- Residential Treatment
- Outpatient Treatment
- Holistic Methods
Therapeutic Interventions for Vaping Cessation

- Harm Reduction Therapy
- Motivational Interviewing
- Refusal Strategies
- Nicotine Replacement Therapy
- Cognitive Behavioural Therapy
Coping with Stress Without the Use of Addictive Substances

**Exercise**
Physical exercise has a positive effect on mood

**Eat a Well Balanced Diet**
Provides our body with energy and increases mental agility

**Developing Hobbies**
It is crucial to set aside time for leisure and enjoyment

**Spend Time in Nature**
Known to have positive effects on emotional states

**Mental Exercises**
Helps manage stress in the long term
Youth Resources

- **Colliding Crisis: Youth Mental Health and Vaping**
  - [https://www.thetruth.com/breathofstressair](https://www.thetruth.com/breathofstressair)
  - [https://truthinitiative.org/thisisquitting](https://truthinitiative.org/thisisquitting)
  - [https://ma.mylifemyquit.org/index](https://ma.mylifemyquit.org/index)
- **Text Messaging Prev Program - This is Quitting**
- **Stanford REACH Lab Vaping Prevention Online Course: Student Self-Paced Version**
- **Stanford REACH Lab My Healthy Future - Student Self-Paced Version**
- **Kick It California**
- **SmokefreeTXT for Teens**
- **The Truth Initiative: Vaping and Mental Health**
- **Youtube Video - My Vaping Mistake : How it Affected my Mental Health !**

Adult Ally Resources

- **Parent Skit Resource**
  - [https://www.lung.org/quit-smoking/helping-teens-quit](https://www.lung.org/quit-smoking/helping-teens-quit)
- **Stanford Tobacco Prevention Toolkit: You and Me, Together Vape Free Curriculum**
- **Stanford Tobacco Prevention Toolkit: Our Healthy Futures**
- **YVAPE**
- **The Vaping Information, Solutions, and Interventions Toolkit (VISIT)**
- **Mental Health and Vaping**
  - [https://www.mentalhealthfirstaid.org/population-focused-modules/youth/](https://www.mentalhealthfirstaid.org/population-focused-modules/youth/)
  - **The Link Between Vaping and Mental Health**
Tobacco Use Prevention Education
Vaping Is the New Cigarette Parent Resource Guide (2023)
Created By: We Lead Ours

Educación para la Prevención del Uso del Tabaco
Guía de Recursos para Padres: El Vapeo es el Nuevo Cigarrillo (2023)
Creado por: We Lead Ours
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https://www.cdc.gov/mmwr/volumes/71/ss/ss7105a1.htm?s_cid=ss7105a1_w

https://www.genome.gov/genetics-glossary/Gene-Expression

https://www.fda.gov/tobacco-products/youth-and-tobacco/results-annual-national-youth-tobacco-survey#:~:text=In%202022%2C%20about%201%20in,(past%2030%20days),text=14.1%25%20(2.14%20million)%20of,reported%20current%20e-cigarette%20use
Questions?