

School-Based Cannabis and Tobacco Prevention/Cessation Curricula from Stanford REACH Lab

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Lucile Packard Children's Hospital Stanford 2023 National School-based Health Care Conference, 6/27/2023

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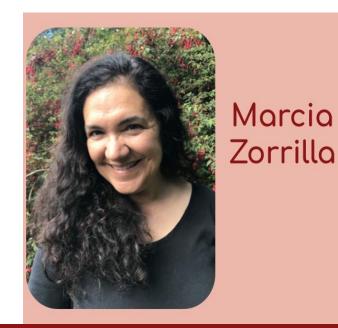
Through Joint Accreditation, credits are also available under the following bodies:

- American Academy of PAs (AAPA)
- American Dental Association's Continuing Education Recognition Program (ADA CERP)
- American Psychological Association (APA)
- Association of Social Work Boards (ASWB)
- Commission on Dietetic Registration (CDR)



3







Brenda Rodas



Lucile Packard Children's Hospital Stanford 2023 National School-based Health Care Conference, 6/27/2023





Agenda

Introductions & Learning Objectives
 Overview of vaping products and use rates
 Review curricula and resources
 Live walk-through of website
 Toolkit activities
 Questions and closing



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REACH Lab



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Reach Lab **Stanford Youth Action Board**

Stanford Youth Action Board 2022-2023



































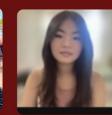


Reach Lab **Stanford Youth Action Board**

Stanford Youth Action Board 2022-2023

































Who are you?



Lucile Packard Children's Hospital Stanford 2023 National School-based Health Care Conference, 6/27/2023





Learning Objectives:

1. Describe the vaping and cannabis epidemic affecting youth 2. Acquire skills in navigating the Toolkit websites and curricula **3. Practice using activities from the Healthy Futures** curriculum and VISIT toolkits



Stanford





Vaping and Cannabis Use



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E-cigarette Products

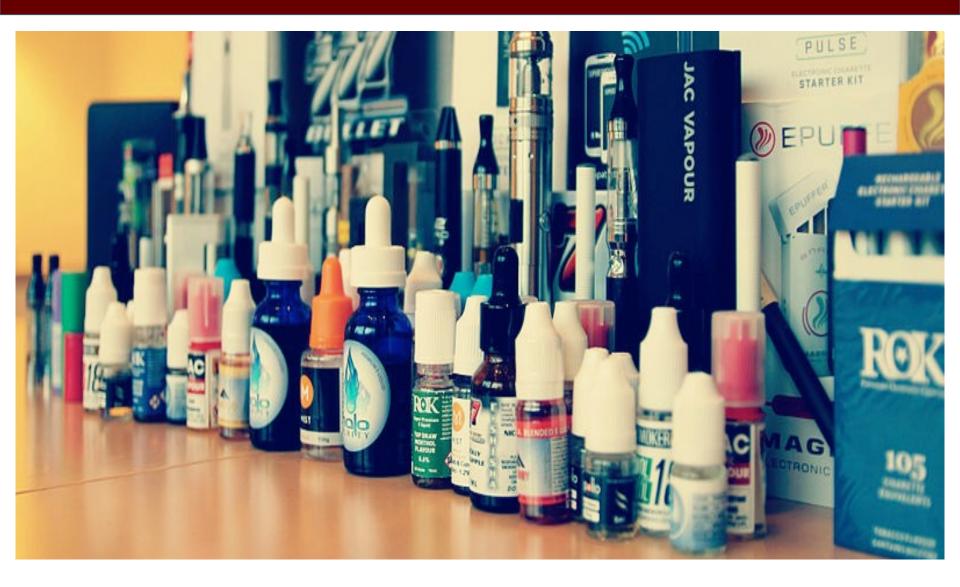


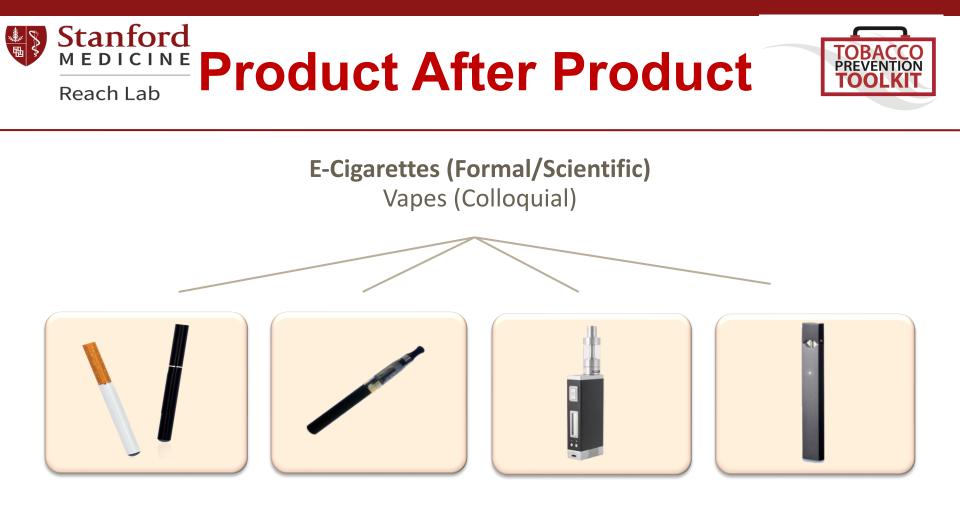






E-Juice/E-Liquid









5th Generation: Disposables





"5th" Generation



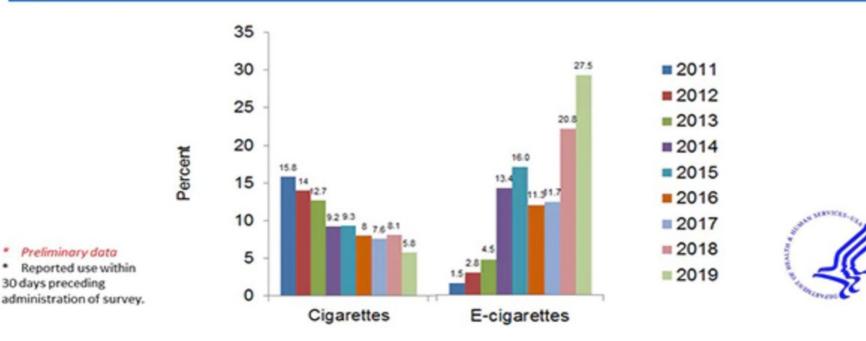






National 2019 Data

NATIONAL YOUTH TOBACCO SURVEY*: HIGH SCHOOL STUDENT USE OF E-CIGARETTES CONTINUES TO CLIMB



Source: U.S. Department of Health and Human Services, 2019



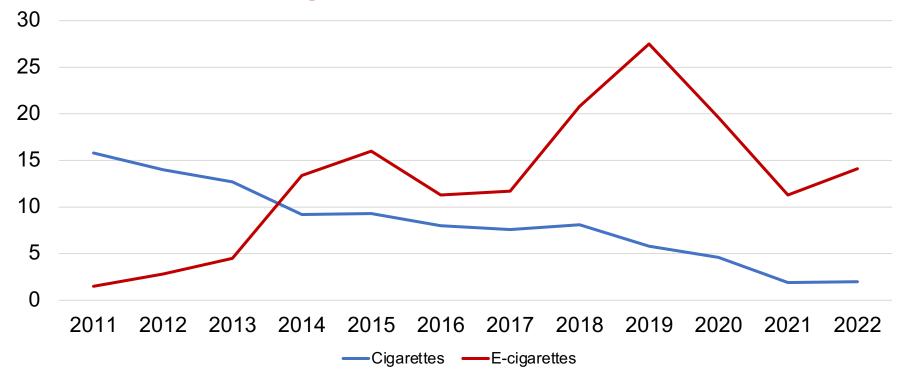
What products are you seeing in your schools?





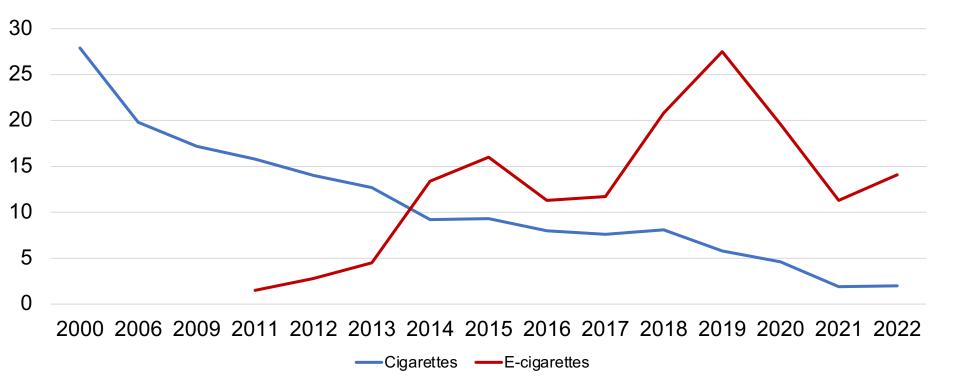


Past 30-day Use of Cigarettes vs Ecigarettes; 2011-2022 High School Students



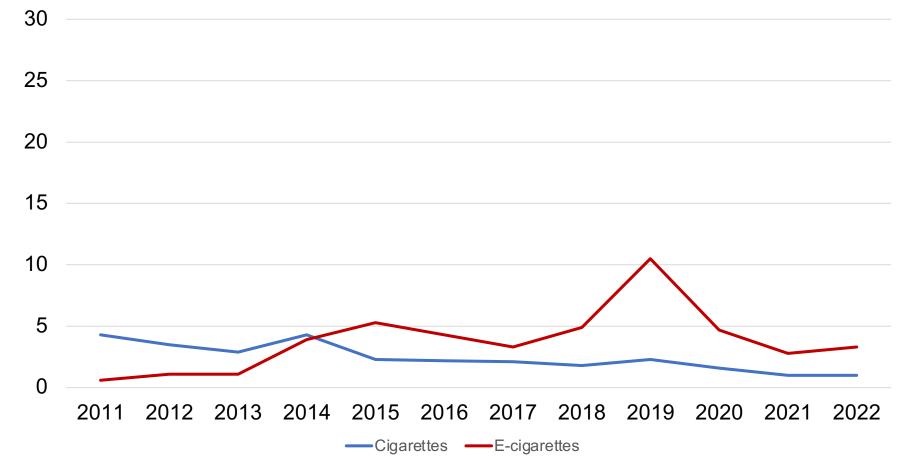
NYTS, 2011-2022

Past 30-day Use of Cigarettes vs Ecigarettes; 2000-2022 High School Students



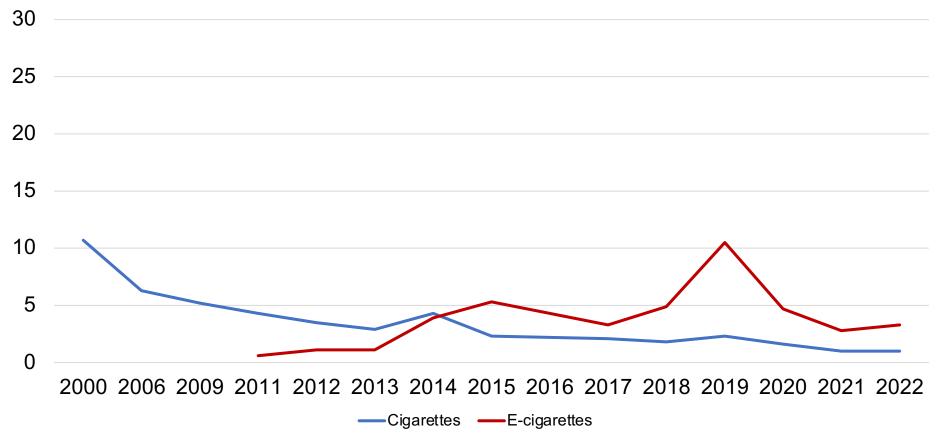
NYTS, 2000-2022

Past 30-day Use of Cigarettes vs Ecigarettes; 2011-2022 Middle School Students



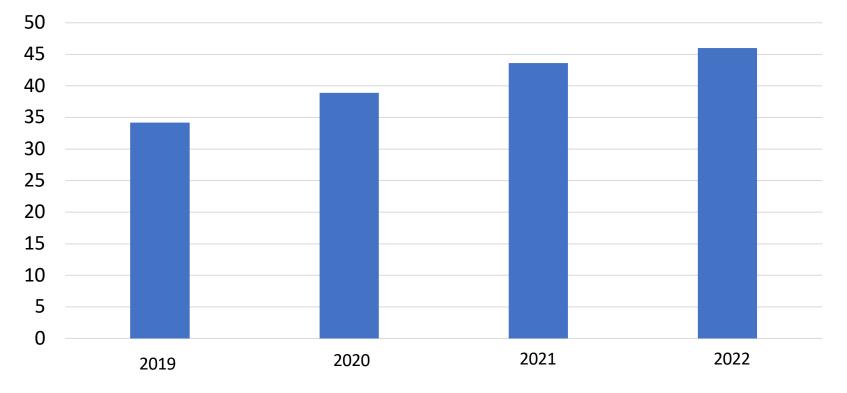
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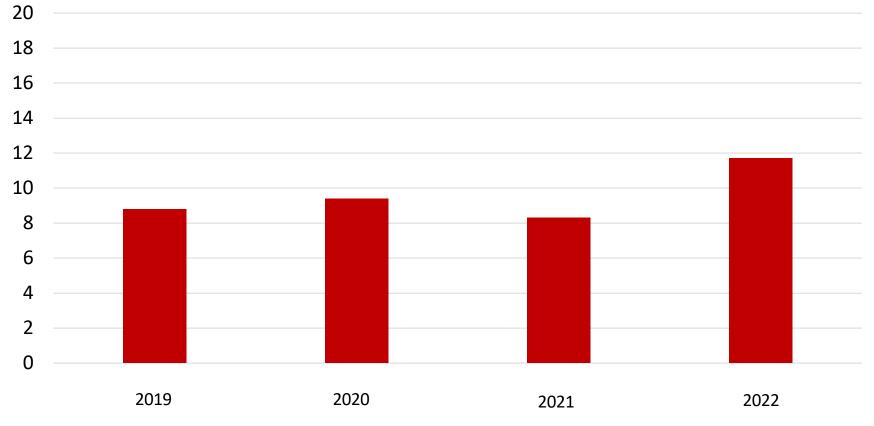


NYTS, 2000-2022

Frequent E-cigarette Use, 20 out of 30 days High School Students, 2019-2022



Daily E-cigarette Use High School Students, 2019-2022



NYTS, 2019-2022

Rates During and After Pandemic

Still a Major Public Health Crisis!



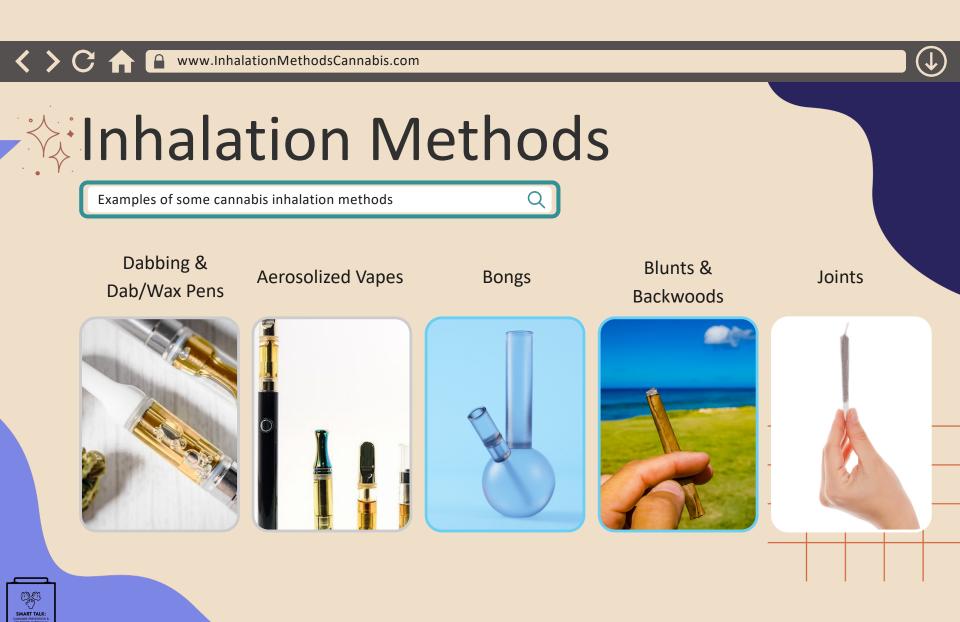




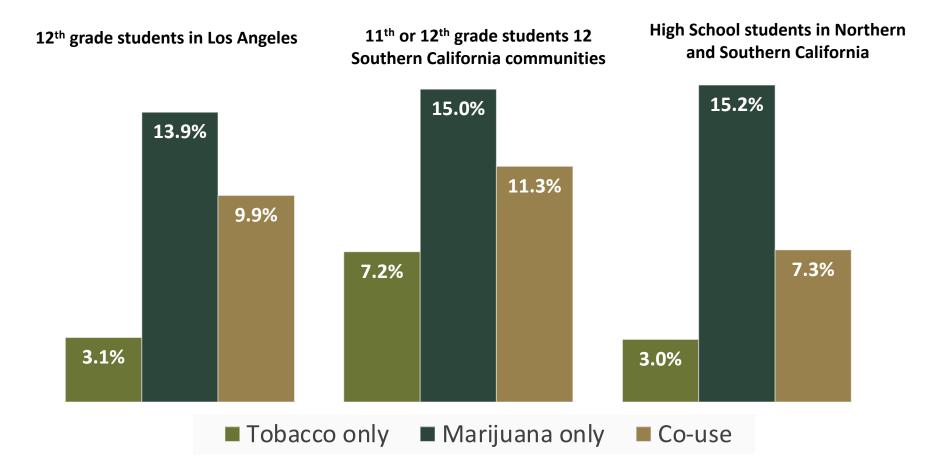
Other Vaping Products



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Past 30-Day Co-Use of Tobacco and Marijuana Use



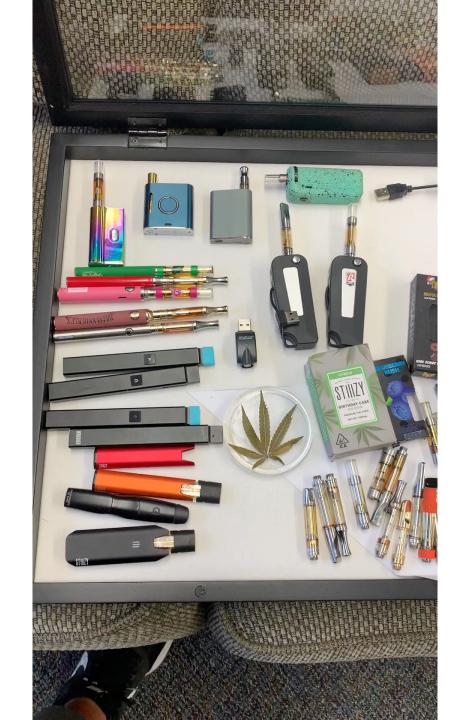
Youth Vaping and Cannabis



- <u>33% of high school students</u> who ever used e-cigs reported using cannabis in their e-cigs.
- <u>23% of middle school students</u> who ever used e-cigs reported using cannabis in their e-cigs.
- Youth who vape are **3.5 times more likely to use cannabis** than vape-free youth.



Trivers KF, et al. Prevalence of Cannabis Use in Electronic Cigarettes Among US Youth. JAMA Pediatr. Published online Sep 17, 2018. Chadi N, et al. Association Between Electronic Cigarette Use and Marijuana Use Among Adolescents and Young Adults A Systematic Review and Metaanalysis. JAMA Pediatr. published online August 12, 2019.





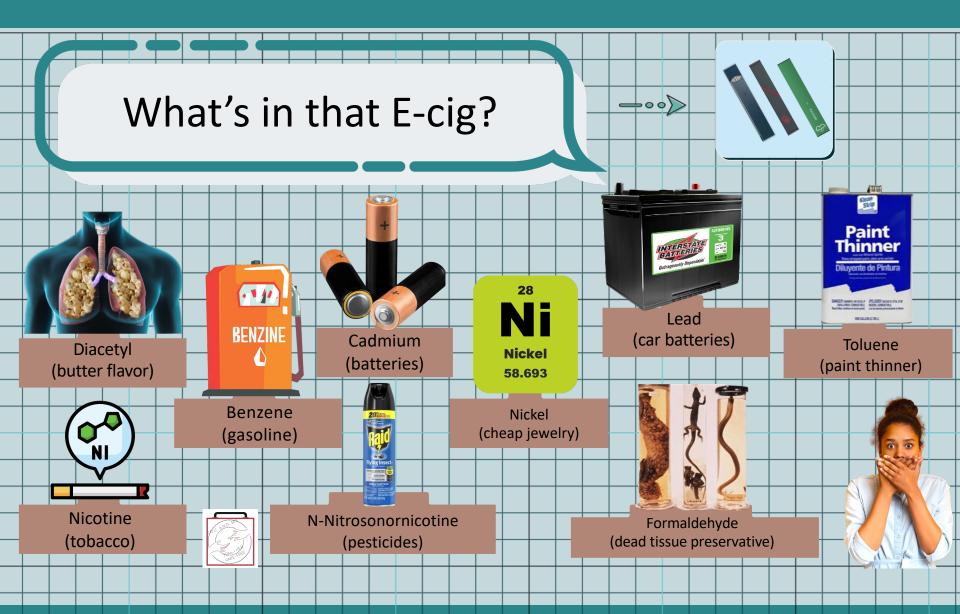




What's in E-Cigs?



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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 Acenapthene **Fluoranthene** Benz(a)anthracene Chrysene Retene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene

WHAT'S IN THAT AEROSOL?

> Benzo(ghi)perylene 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

AND WE



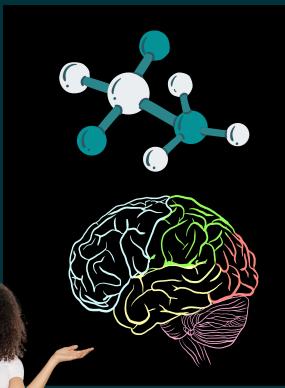


Why Are We Concerned about Tobacco?

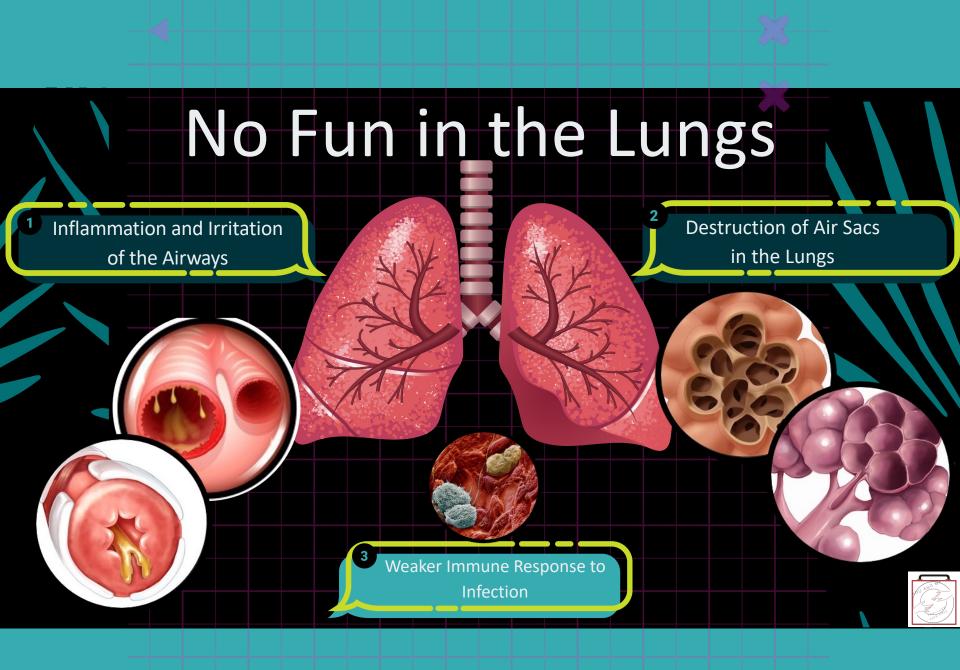


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NICOTINE EFFECTS



- Highly addictive substance
- Causes changes in brain chemistrystimulates pleasure centers, alters normal brain function
- As nicotine levels in brain drop, brain craves nicotine to feel pleasure and relieve feelings of anxiety and stress (withdrawal)



Vaping-related Lung Illness



Screening teens for vaping history key to diagnosing lung disease during pandemic

February 06, 2023

< Share

UT Southwestern study shows teens continued to be hospitalized with severe lung injuries related to vaping despite social isolation of pandemic



ORIGINAL ARTICLE

Clinical manifestations of EVALI in adolescents before and during the COVID-19 pandemic

Bayan Abdallah MD, Harin Lee BA, Sitara M. Weerakoon PhD, MPH, Sarah E. Messiah PhD, MPH, Melissa B. Harrell PhD, MPH, Devika R. Rao MD 🔀

First published: 18 December 2022 | https://doi.org/10.1002/ppul.26283





🏏 in 🖾 🔒

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A Hit to the Heart

Risk for Blood Clotting

Stiff blood vessels





Why Are We Concerned about Cannabis?



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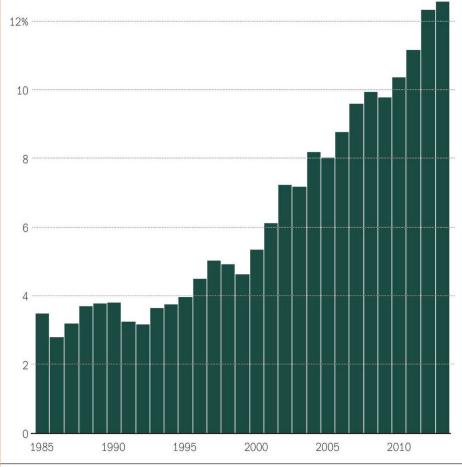
Why is THC a Concern?

- Different methods, similar and different risks
- Difficult to determine the amount of THC being consumed
- THC negatively impacts brain development

MART TAL

Weed is getting stronger

Average THC percentage in federal seizures of imported marijuana, 1985 – 2013



WASHINGTONPOST.COM/WONKBLOG

Source: White House Office of Nat'l Drug Control Policy



Cannabis Use Disorder*

Risk of developing this disorder is highest during adolescence & who use more frequently.

3 in 10 people who use cannabis have a cannabis use disorder

オオオオオオ

*When someone is unable to stop using cannabis, even if it causes them health or social problems.



THE BODY ON CANNABIS

Altered brain development, anxiety, paranoia, slowed reactions, poor memory



Lung inflammation, cell damage, chronic cough, slowed breathing, respiratory infections

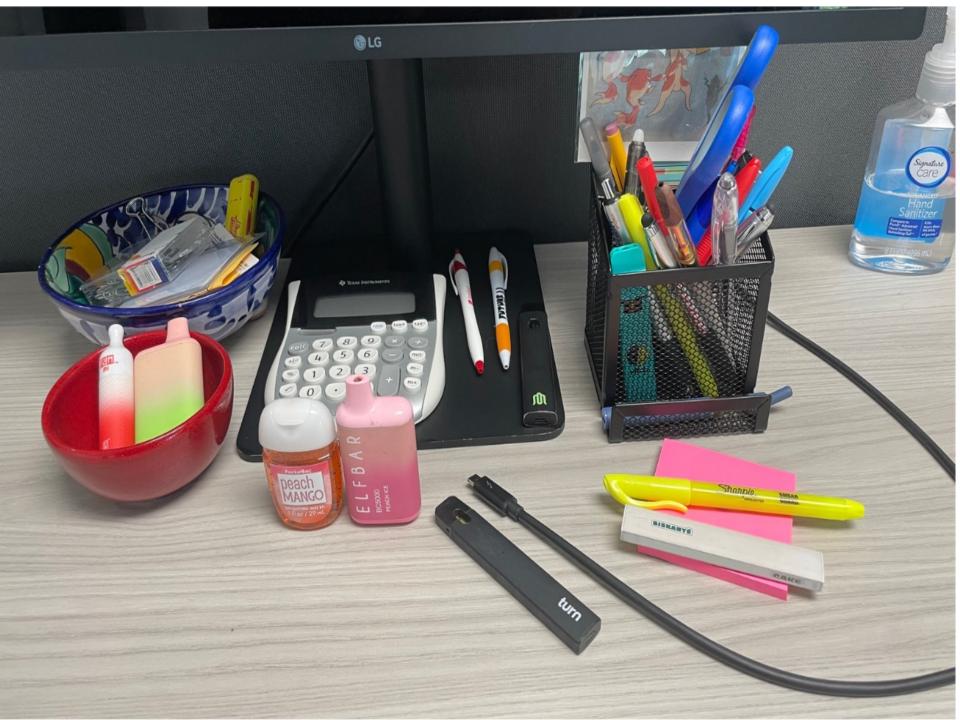
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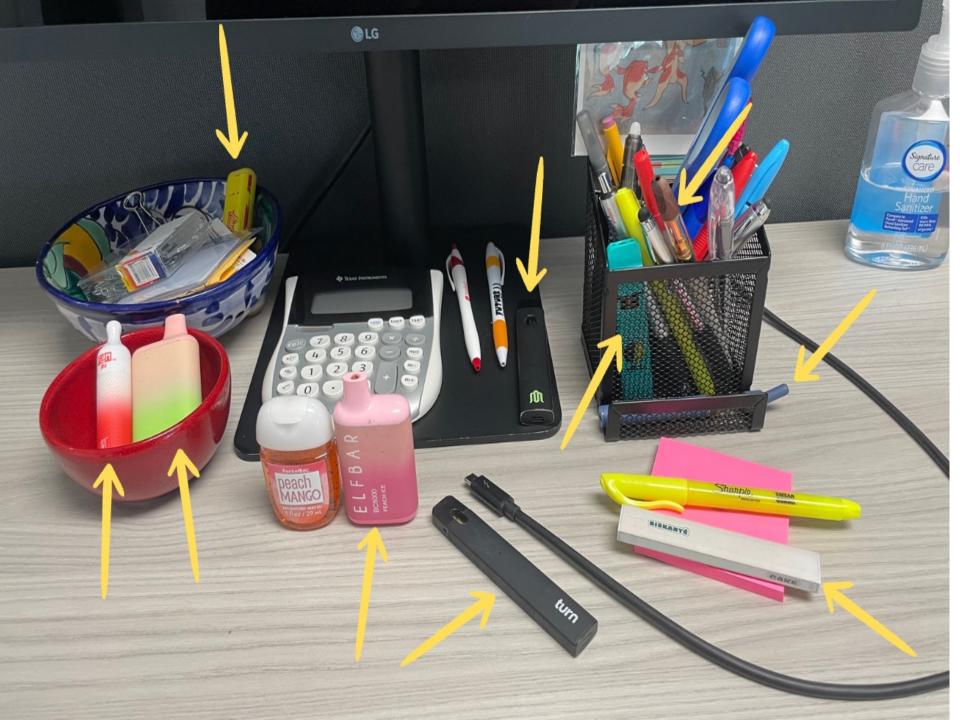
Increased appetite, nausea, vomiting

Increased heart rate by 20-50 beats per minute

Poor muscle coordination, imbalance, falling











What You Can Do / Resources



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Research and Education to Empower Adolescents and Young Adults to Choose Health

Stanford REACH Lab offers free curriculums and resources to supplement prevention, education, harm-reduction, interventions and cessation on: vaping/e-cigarettes, cannabis, drugs and other substances. Scan the QR code below to learn more!



Connect with us and learn more by scanning the QR Code:







Connect with us and learn more about our

FREE RESOURCES

by scanning the QR Code above!

tinyurl.com/stanfordreachlab



tobaccopreventiontoolkit.stanford.edu

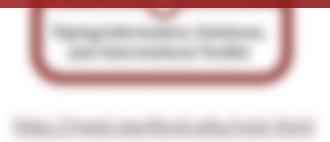
med.stanford.edu/cannabispreventiontoolkit.html



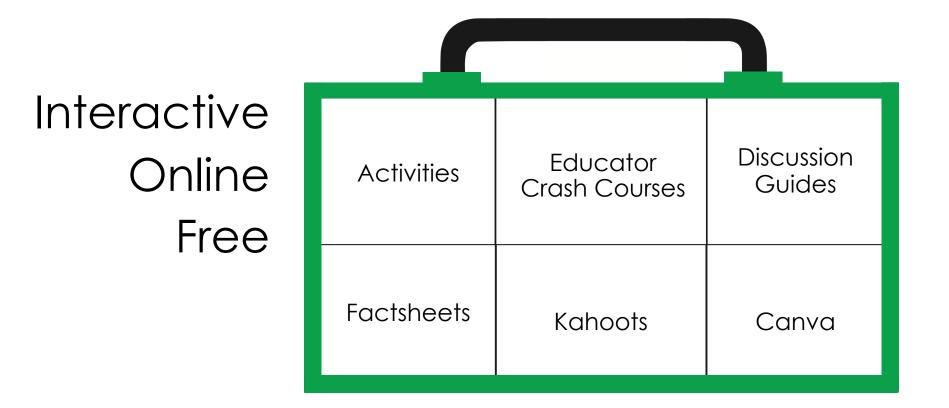
http://med.stanford.edu/visit.html



- Reached almost 3 million students globally.
- Used by thousands of educators and schools
- Pre-post tests: changes in knowledge, attitudes, and intentions
- RCTs happening now



Toolkit Content



Development and Evidence

Theory

- + Research
- + Partnerships
- + Evidence-informed
- + Ability to revise/update quickly
- + Fact-checked
- = <u>Toolkit</u>

Elementary, Middle, and High School Curricula

https://med.stanford.edu/tobaccopreventiontoolkit/you-and-me-together-vape-freecurriculum.html



6 CURRICULUM LESSONS



1. Full of Potential: Your Brain Nicotine-Free

2. Healthy Body, Healthy YOU-th: Effects of E-Cigarettes on the body



3. What a Waste! Impact of Cigarettes and E-Cigarettes on the Environment

4. Don't Be Played! How Tobacco Marketing Targets YOU-th

5. Be Your Strength: Stress, Coping, and Wellness

6. Can't Be Missed: Cannabis & YOU-th





(50 MINS EACH)

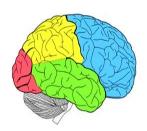


MIDDLE & HIGH SCHOOL CURRICULA

https://med.stanford.edu/cannabispreventiontoolkit/smart-talk-curriculum.html



5 CURRICULUM LESSONS



1. Full of Potential: Your Brain Cannabis-Free

2. Healthy Body, Healthy YOU-th: Effects of Cannabis on the body



(50 MINS

EACH)



3. Healthy People, Healthy Community

4. Is the Cannabis Industry misleading YOU-th? Exploring Messaging and Marketing Tactics Used in Media



5. Be Your Strength: Stress, Coping, and Wellness



Responding with Compassion & Empathy (Activity)

Becca & Natasha





Responding with Compassion & Empathy (Activity)

Becca & Natasha

- What did you see here?
- What is really happening?
- How relatable is this skit?
- Both characters in the video talked about ways to help their friend Sarah.
 Which of the two characters' messages would you find most helpful if you were Sarah? Why is that?
- What can you do about the situation with Sarah if she was your friend?



HEALTHY FUTURES ALTERNATIVE TO SUSPENSION





HEALTHY FUTURES

2 VERSIONS

<u>MY</u> HEALTHY FUTURES <u>OUR</u> HEALTHY FUTURES





MY Healthy Futures

- Self-paced course, 40-60 mins
 Receive certificate of completion at the end





Our Healthy Futures

• 2- or 4-Hour Healthy Futures Curriculum







Where should I start?



1-hour MY Healthy Future Course 2- or 4-hour Healthy Futures Curriculum 4-hour Healthy Futures Curriculum

First time (independently) Second or more times (1 facilitator with small group)



Saturday School



Activity 1: Pre-Assessment

Healthy Futures

Pre-Assessment

- 1. If I take time to plan when to vape, how to pay for it, where to get it, do it first thing in the morning, leave class to do it – my brain might be:
 - A. Good at planning
 - B. Addicted
 - C. Manipulated by big tobacco
 - D. Aerosolized

2. Which of these increase the addictiveness of a cigarette and an e-cigarette/vape:

- A. Sugar
- B. High levels of nicotine
- C. Flavors
- D. All of the above
- 3. Why might someone start feeling intense withdrawal symptoms after using a JUUL for a short period of time?
 - A. The nicotine in 1 pod is close to 2 packs of cigarettes
 - B. Because they are craving the flavors
 - C. Their pleasure pathway is weaker than others
 - D. The person may just be anxious in general
- 4. Which of the following is NOT true of how vaping affects your body?
 - A. Flavors and other chemicals impair lung function
 - B. The aerosol causes arteries to harden and increases blood pressure
 - C. They are healthy for adults
 - D. Nicotine turns your brain against you

5. Besides youth, what other vulnerable group has big tobacco targeted with the use of menthol flavored tobacco/nicotine products?

- A. Women
- B. African Americans
- C. Elderly
- D. Athletes



Tobacco Prevention Toolkit Division of Adolescent Medicine, Stanford University www.tobaccopreventiontoolkit.stanford.edu, tobprevtoolkit@stanford.edu

ID Number: ____

Healthy Futures

"Where Are You At?" (Part 1)

1. When was the last time you used e-cigarettes/pod vapes?

- ____in the past 24 hours
- 2 7 days ago
- 8-30 days ago
- more than 30 days ago
- 2. How often do you use e-cigarettes/pod vapes? (Check one below.)
 - ____every weekend
 - __several times/week
 - ___every day
 - ____ several times/day

3. Have you ever used both e-cigarettes/pod vapes and other tobacco products (e.g., cigarettes, cigars, etc.)?

___no ___yes

4. What type of e-cigarette/pod vape device do you use?

- pod-based (e.g., JUUL and Puff Bar)
- mod-based
- vape pens
- ___don't know
- 5. If using pod-based e-cigarettes/pod vapes, such as JUUL and Puff Bar, how many pods do you vape per day?
- 6. What type of flavors do you use?

7. What concerns, if any, do you have about the safety of e-cigarettes/pod vapes?

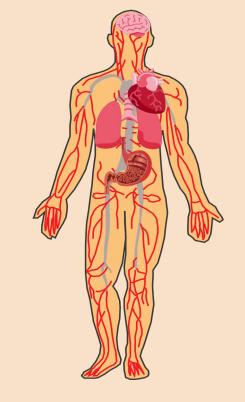
8. On a scale from 1 to 10 (where 1 means not ready and 10 means very ready), how ready are you to change your e-cigarettes/pod vapes? Circle below.



Activity 2: Where are You At







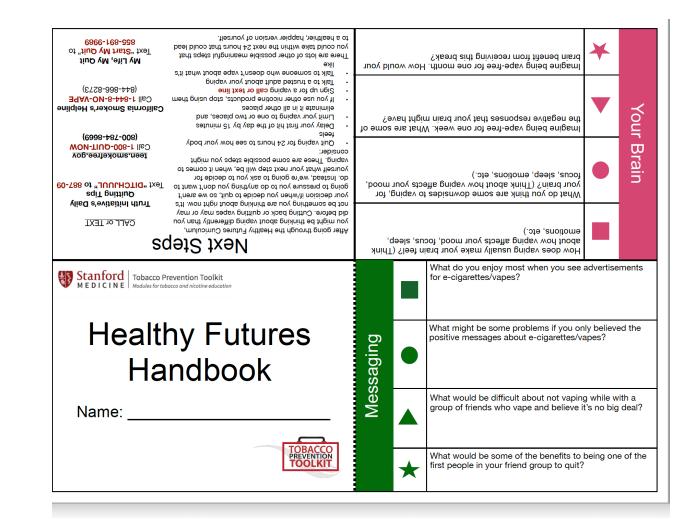
Congrats for deciding to quit nicotine!

It's never too late to quit, whether this is your first time or if you have tried before. In this section, we'll help you make a plan for your Quit Date.





Healthy Futures Handbook



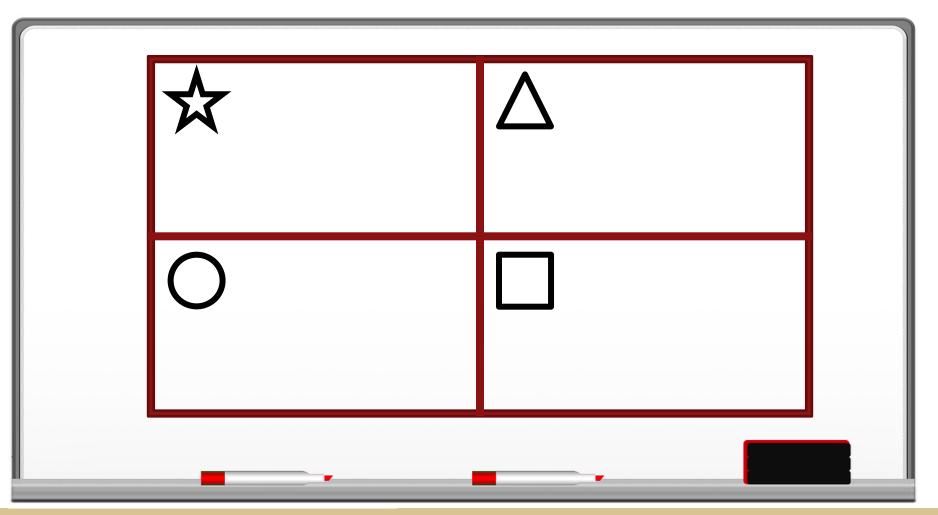
Healthy Futures Handbook



		What are some health benefits to vaping?			Benefits	Drawbacks	
ects	_		٦	ck on	$\overrightarrow{\mathbf{x}}$	\bigtriangleup	
	•	What are some negative health consequences of vaping?	mentur	Quitting or Cutting Back on Vaping			
ר Eff		What do you think you would miss feeling, if you took a break from vaping for a few days?	r Mo	Quittin			
Health Effects			You	luch You	\bigcirc		
	*	How might your body positively respond to taking a break from vaping?	Making Your Momentum	Continuing How Much You Vape			
Cost		What about purchasing or receiving your e-cigarettes/ vape products do you like most?		What do you see as your next step? When can you complete it by?			
		Calculate how much you spend on vapes in a year. Make a list of three important things you could afford with this	_	What do you need in order to complete that step?			
	•	amount of money.		What might be some barriers that keep you from completing that step? How will you manage them?			
		What are some financial drawbacks to quitting?	Your Plan	How do you think that you will feel when you complete that next step?			
	*	How would not spending money on e-cigarettes/vapes benefit you?		Who	can you ask for support to com	plete this step?	

Group Share





ID Number:

Healthy Futures

Post Assessment

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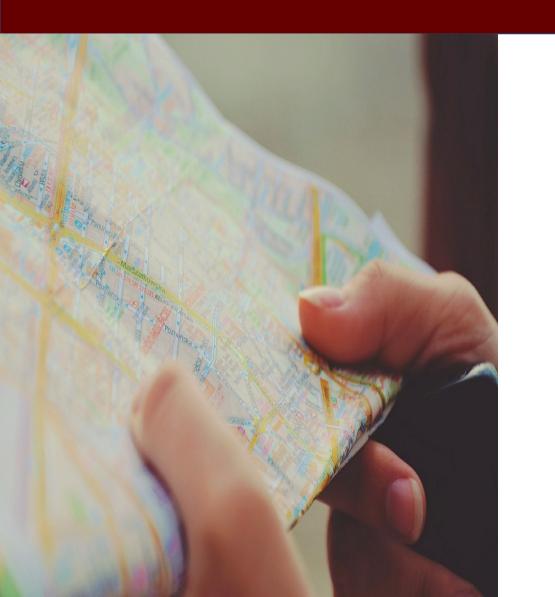
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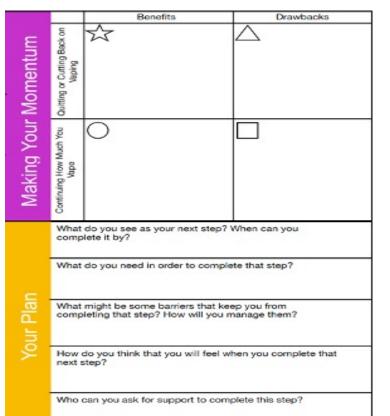
Activity 5: Post-Assessment

Activity 6: Where are You At

		"	Where A	re You A	At?" (Par	t 2)			
			0 (where 1 ge your e-c					ady), how	
	2	3	4	5	6	7	8	9	10
eady	-	5		-					Very Re
3. C	 b. I may c. I war d. I war 	y consider at to cut ba at to quit	n making ar cutting back ck yself in the	c					
_									
- - 4. IB -	lelp I may	need to ac	complish tl	hat goal is	i				

Make Your Momentum





Our Healthy Futures Roleplay Activity

- Get into groups of 4 (1 teacher, 3 students)
- Roleplay Activity 1 "Where are you at?"
- Discuss how you would engage students in conversations after this assessment



Activity 1: Pre-Assessment

Healthy Futures

Pre-Assessment

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Tobacco Prevention Toolkit Division of Adolescent Medicine, Stanford University www.tobaccopreventiontoolkit.stanford.edu, tobprevtoolkit@stanford.edu 1. Create a welcoming space that is safe, non-judgmental, and confidential.

- a. Establish rapport with the youth.
 - i. "Welcome! I'm glad you're here." (smile).
 - ii. Do introductions of everyone (e.g., teacher/facilitator, youth).

iii. Discuss the limits of confidentiality: "Everything discussed in this space is confidential. In other words, what you say here stays here unless you tell me you want to hurt yourself. What do you think I mean by hurt yourself or hurt others? (answer: kill self or kill others). What do you think I mean by someone is hurting you? (answer: someone is physically, sexually, or emotionally abusing you). Aside from this, everything else is confidential."

- iv. Have a conversation, not a confrontation, with the youth.
- v. (<u>Note</u>: for group settings) Throughout the presentation, notice if the youth is reluctant to ask questions or comments (e.g., puzzled look, etc.), and gently say, "I noticed that you might want to say something, what would you like to say or ask?"
- 2. Ask youth, "what were you told about this meeting?"
- 3. Tell youth, "you're not in trouble."
- 4. Share overview/purpose of the ATS Curriculum
 - a. Provide you with some health information about e-cig/vapes
 - b. Collaborate with you on setting goals related to your e-cig/vape use
- 5. Ask youth, "do you have any questions for me before we start?"



healthy or y res

HEALTHY FUTURES ALTERNATIVE TO SUSPENSION





Live Demonstration





http://med.stanford.edu/visit.html



Goals of VISIT

Provide AYA Healthcare Providers with:

- The most up-to-date and relevant information on vaping.
- Youth-friendly printouts for the clinical setting.
- Information on screening, counseling, and supporting young people who are using ecigarettes/vapes.
- Easy-to-share resources for young people ready to quit and families wanting to support them.





- The Essentials what do I Need to Know About Vaping
- The Clinical Encounter what do I tell my patients/their family
- Further Resources

Scavenger hunt



- Factsheet on Environmental impact
- Why do youth start vaping?
- Self-administered CRAFFT+N interview
- Screening Tools Table
- Tips for Managing Stress & Anxiety PDF poster
- Withdrawal symptoms
- Positive Alternatives YAB video: Alternatives to Coping



safety first

EVIDENCE AND SCIENCE BASED HARM REDUCTION DRUG EDUCATION CURRICULUM



REACH Lab

What is a harm reduction Stanford drug education curriculum?

A harm reduction approach to drug education <u>discourages</u> young people from using alcohol and other drugs, but <u>offers</u> <u>more</u> than an abstinence-only approach by providing teenagers with <u>information to</u> <u>keep themselves and others safe</u> if, and when, they encounter these substances.

Safety First

A Reality-Based Approach to Teens and Drugs

safety first

Maraha Rasanbaum, PhD

15 LESSONS



What is a Drug
 Setting the Stage
 Be Your Strength:

Stress, Coping & Wellness

safety first

- 4. How Drugs Work
- 5. Stimulants

6. Alcohol & Other Depressants

- 7. E-cigs: Healthy Body, Healthy YOU-th
- 8. E-cigs: Impact on the Environment
- 9. E-cigs: How Tobacco Marketing Targets YOU-th 10. Cappabis: Effects on the Body
- 10. Cannabis: Effects on the Body

 Cannabis: Healthy People, Healthy Community
 Cannabis: Exploring Marketing Tactics & Messaging
 Prescriptions & Other Opioids
 Psychedelics
 Looking Back, Looking Forward

Social Media

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Reach Lab



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