



**Stanford**  
M E D I C I N E

REACH Lab

# Zyn and Other Nicotine Pouches: Trends, Risks, and Action Steps for Adults Who Support Youth

**Bonnie Halpern-Felsher, PhD, FSAHM**

*Marron and Mary Elizabeth Kendrick Professor In Pediatrics II  
Founder & Executive Director, REACH Lab & Curriculums*

**[bonnieh@stanford.edu](mailto:bonnieh@stanford.edu)**



**Stanford**  
Children's Health

Lucile Packard  
Children's Hospital  
Stanford

- Learn about nicotine pouches including Zyn
  - Rates of youth use
  - Health effects
- Understand why youth use
- Learn about the REACH Lab's new oral nicotine and smokeless tobacco prevention curriculum



Stanford  
MEDICINE

---

REACH Lab

# TYPES OF SMOKELESS TOBACCO

**Oral Moist Snuff (Dip)**



**Chewing Tobacco**

**Oral Moist Snuff (Spit)**



**Dry Snuff**



**Snus**

NO TARI  
SWEET

# TYPES OF ORAL NICOTINE



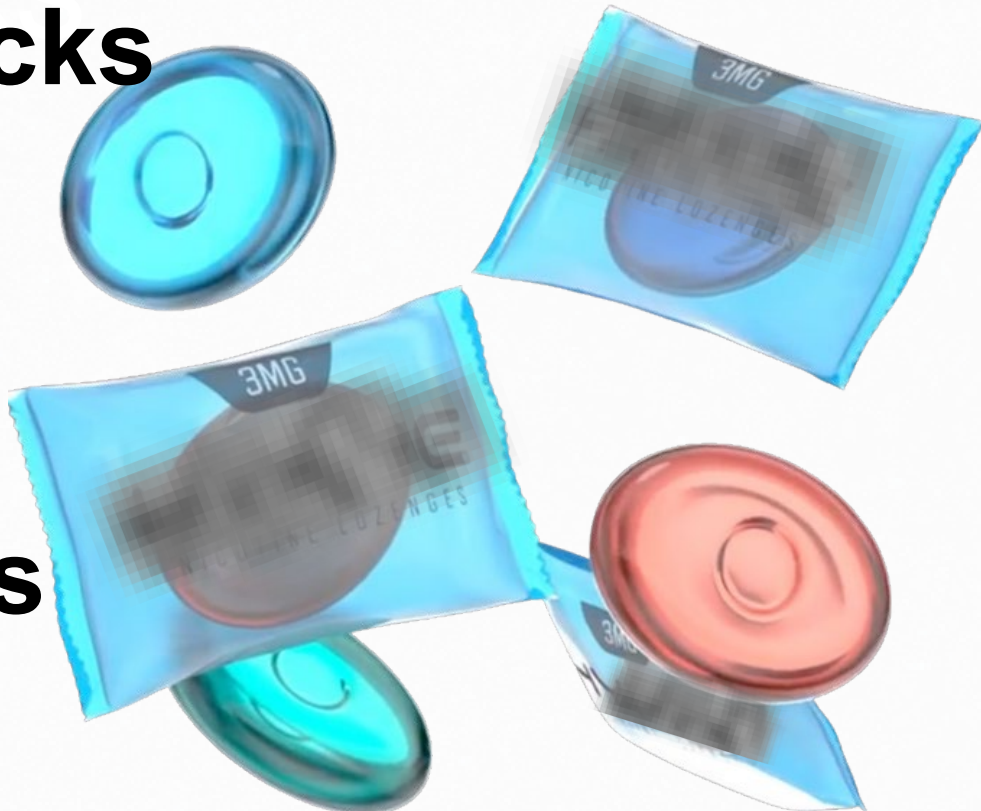
**Nicotine Toothpicks**



**Nicotine Gum**



**Nicotine Strips**



**Lozenges**



**Nicotine Pouches**



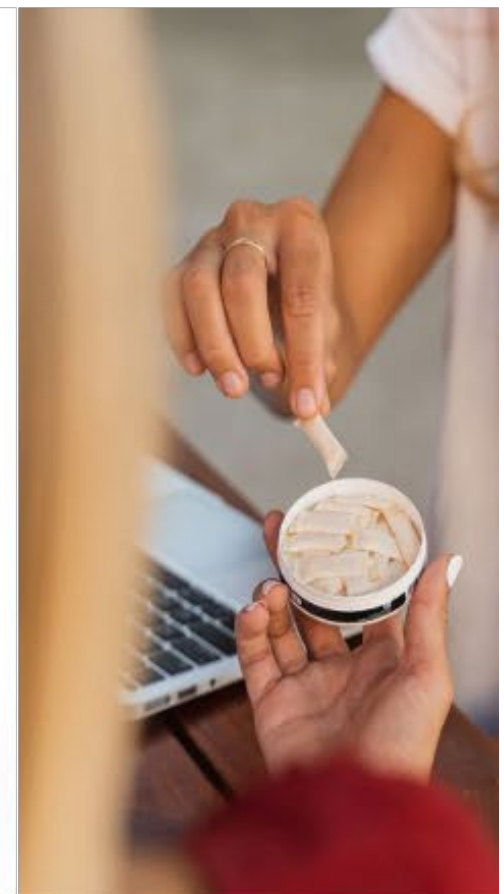
# What are NICOTINE POUCHES?



# Nicotine Pouches



Nicotine pouch



# Nicotine Pouches

- Small fiber pillow-like pouches that hold nicotine powder, flavorings, acidity regulators, and other ingredients
- Synthetic and plant-based cellulose fiber casing
- 1.5 to 16+ mg nicotine per pouch
- Nicotine salts, that deliver a rapid, high peak of nicotine to the brain very quickly
- Nicotine is absorbed directly into the bloodstream through the oral mucosa

# Nicotine Pouches





- Placed in mouth between lip and gums
- Leave in for 20-30 mins
- Youth using multiple pouches at once and throughout the day
- Marketed in similar ways to e-cigarettes (flavors, colors, subtle)



Addictive Behaviors  
Volume 140, May 2023, 107632



Use, marketing, and appeal of oral nicotine products among adolescents, young adults, and adults

[Shivani Mathur Gaiha](#)<sup>a</sup> , [Crystal Lin](#)<sup>a</sup> , [Lauren Kass Lempert](#)<sup>a b</sup> , [Bonnie Halpern-Felsher](#)<sup>a</sup>  

[Show more](#) 

[+](#) Add to Mendeley [Share](#) [Cite](#)

<https://doi.org/10.1016/j.addbeh.2023.107632>

[Get rights and content](#) 



Stanford  
MEDICINE

---

REACH Lab

# THE RISE OF POUCH USE

## PAST 30-DAY TOBACCO USE

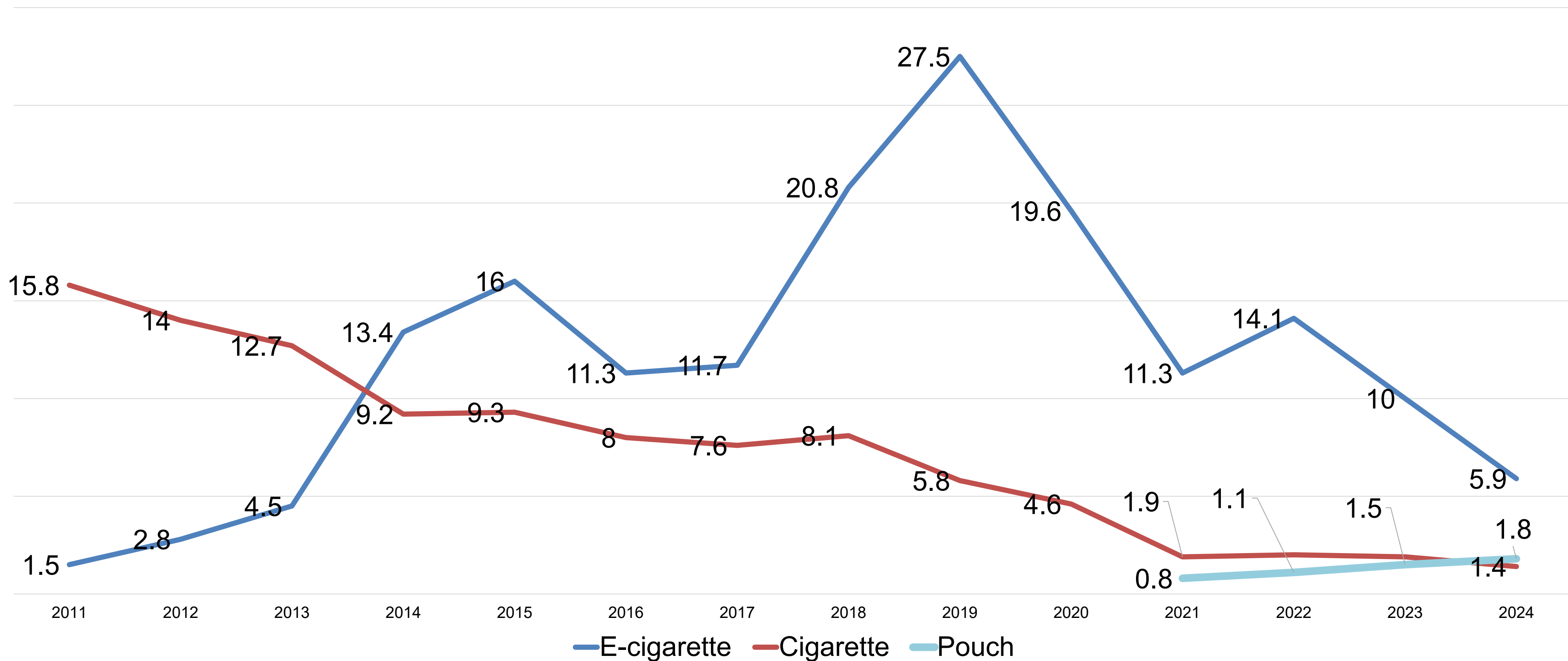
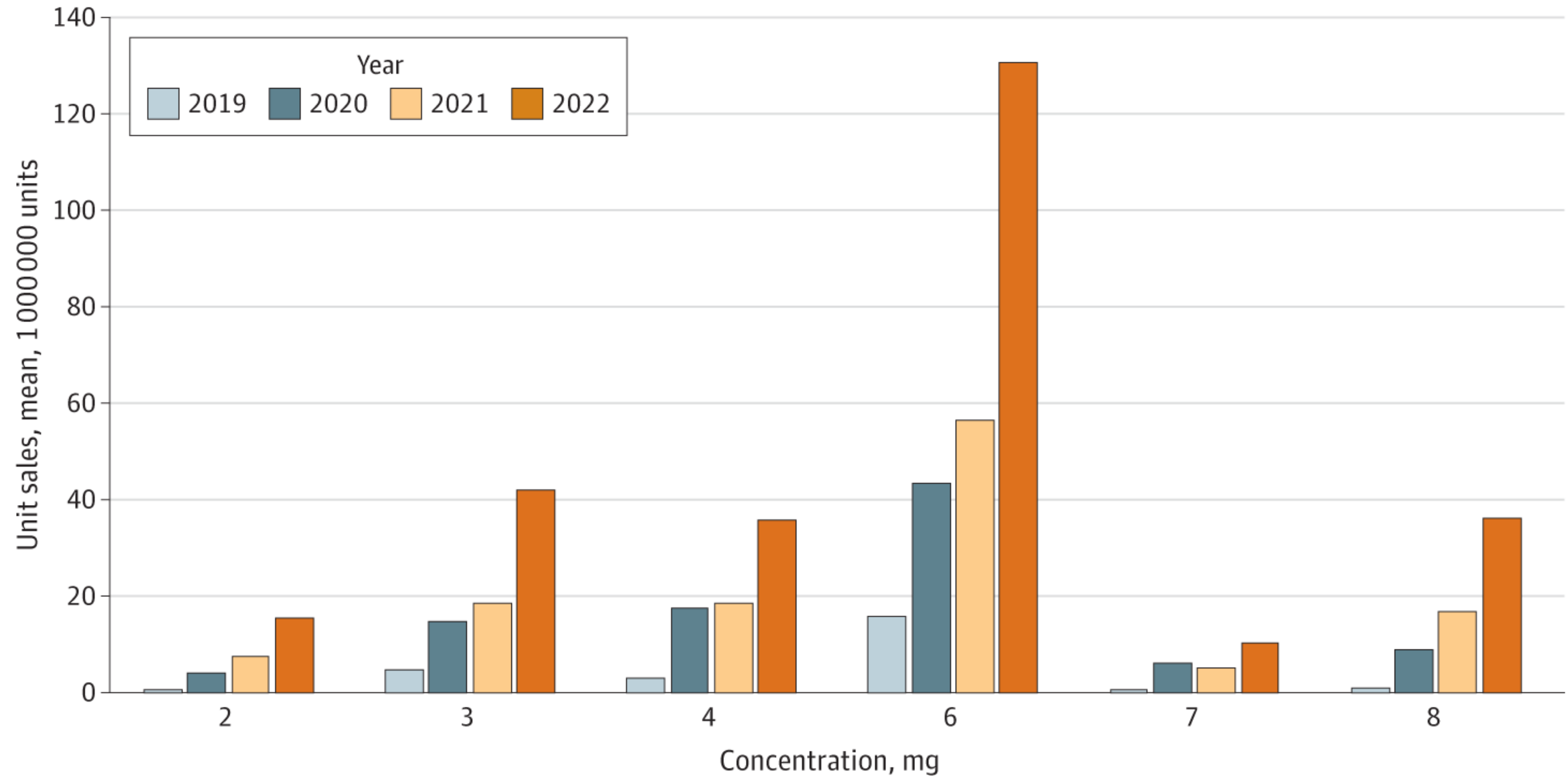


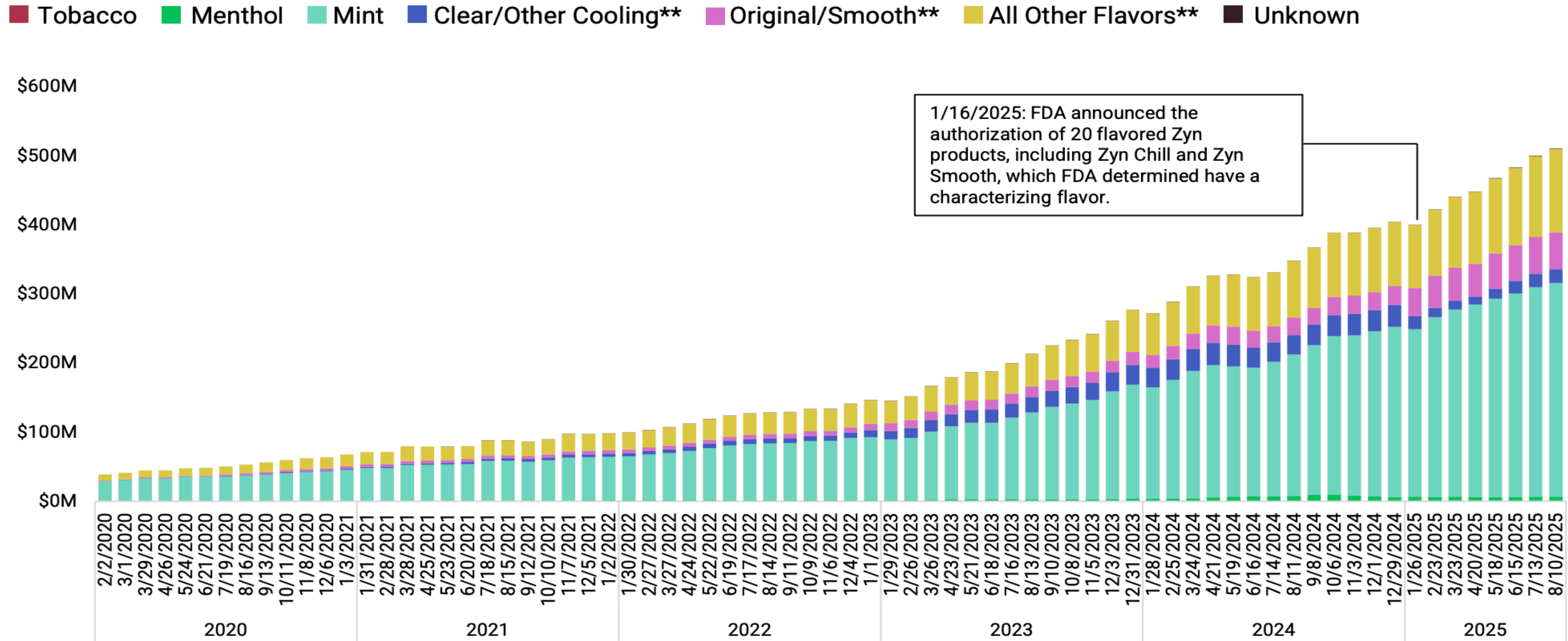
Figure - Data Source: National Youth Tobacco Survey (NYTS), 2011-2024

# Nicotine Pouch Sales by Volume and Concentration



# Nicotine Pouch Sales by Flavor

Figure 1. Total Nicotine Pouch Dollar Sales, by Flavor, United States



\*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods.

\*\*Clear/Other Cooling includes products with flavor names such as clear, clear ice or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Zyn Chill, Oeo Clear). Original/Smooth includes products with flavor names such as smooth or original which likely contain artificial sweeteners (e.g. Zyn Smooth, On! Original, Zyn Original). All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac or other cocktails), candy/desserts/other sweets or some other flavor.

## Trends of Nicotine Pouch Dollar Sales by Flavor from 1/29/2023 to 8/10/2025

Total nicotine pouch dollar sales increased from \$145.5 million to \$510.5 million (+250.8%).



Stanford  
MEDICINE

---

REACH Lab

# General effects of Nicotine Pouches



Remember that nicotine is highly addictive and can harm your brain!

Nicotine addiction

Sore gums and mouth

Changes in cognition

Mental health concerns

Affects learning & memory

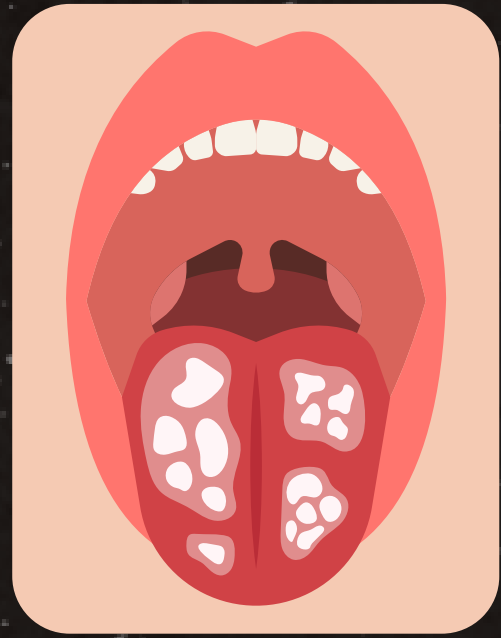
Abdominal cramps

Affects impulse control

Nausea



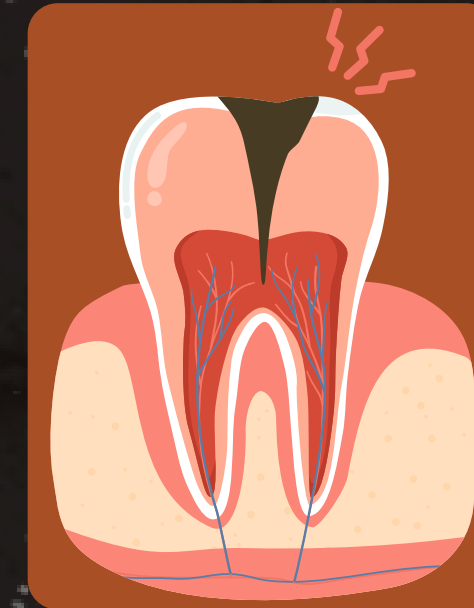
# oral Health Effects



Oral wounds, ulcers, and tumors

Destroys oral tissue

Dry mouth



Enamel erosion



Tooth discoloration

Bad breath

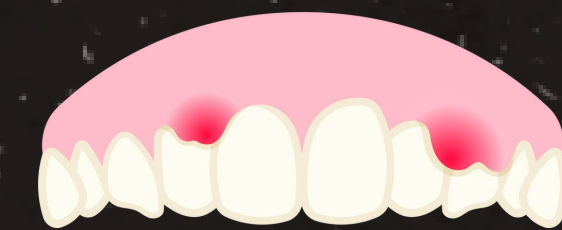


Shrinking gums



Throat cancer

Tooth decays



Gum infection

Oral cancers





Stanford  
MEDICINE

---

REACH Lab

# BIG TOBACCO IN A NEW CAN



# Zyn-fluencers!



“Zynning” like J

“Zynaroni”

“Zynniverse”

“Zynfluencer”

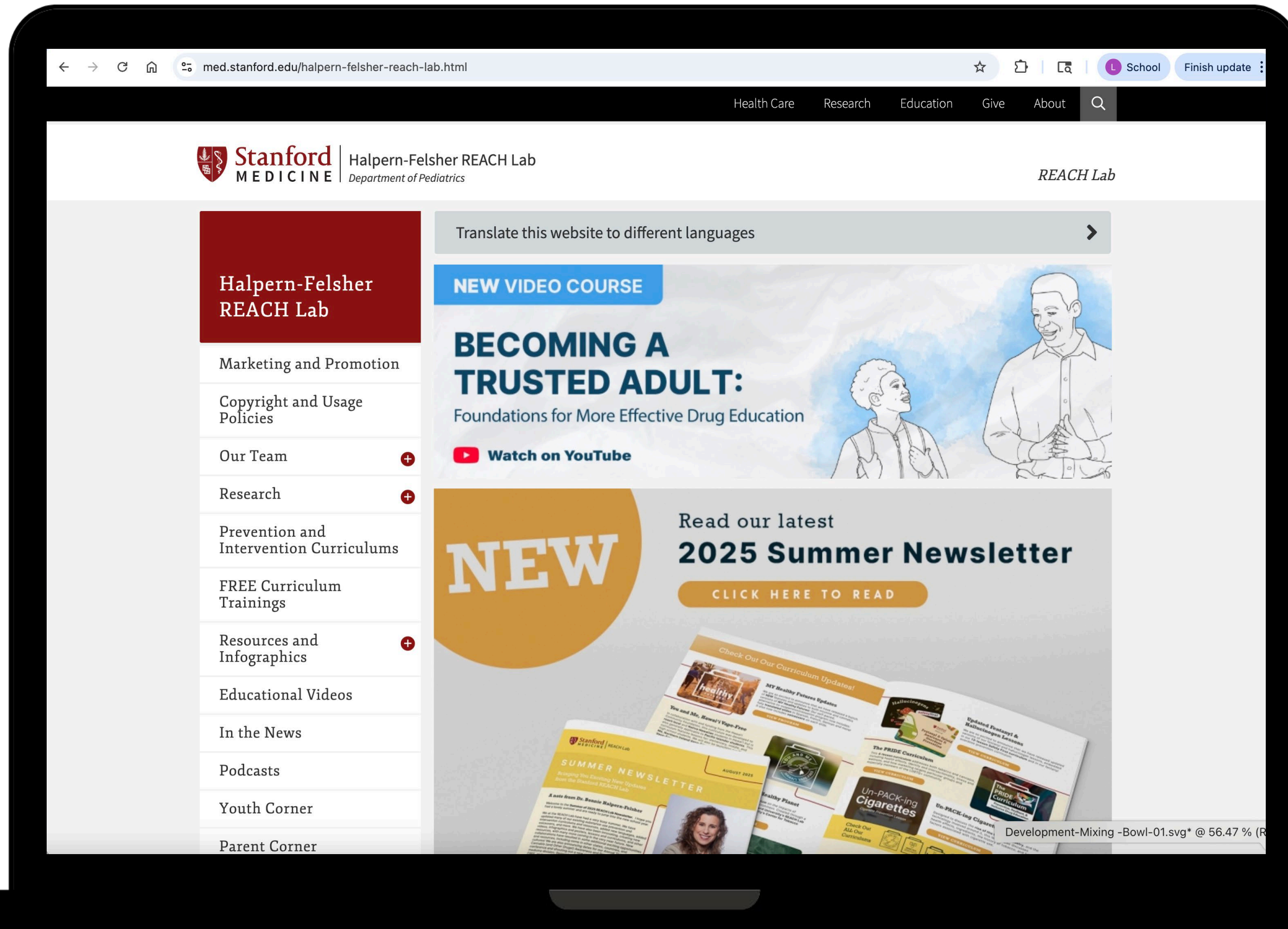
“Zynbabwe”

“ZYN 10 Challenge”





# Our Website



View now!



# Our Evidence-based Toolkits



**The focus of our 3 toolkits...**

# Tobacco Prevention Toolkit



Elementary (2 lessons)  
Middle (5 lessons)  
High school (5 lessons)

**Different Languages  
and Regional Versions!**



(1 lessons)



Middle and High school  
(3 lessons)

Un-PACK-ing  
**Cigarettes**

*Cigarette Prevention Lesson*

Middle & high school  
(1 lessons)



Middle & high school  
(1 lessons)



Middle & high school  
(2 lessons)

# Cannabis Awareness and Prevention Toolkit



Elementary (2 lessons)  
Middle (5 lessons)  
High school (5 lessons)

**Available in Spanish!**

# Drug Prevention and Intervention Toolkit

## FENTANYL AND OPIOID

Awareness and Overdose Prevention

(2 lesson)



**Comprehensive Drug  
Education**

(13 lessons)

AVAILABLE IN  
DIFFERENT  
LANGUAGES

# TOBACCO AND CANNABIS



Self-Paced or Group Led Alternative-to-Suspension &  
Cessation Program.

*(Nicotine & cannabis versions)*



## MY Healthy Futures

This is a **40-60 minute** self-paced, online course for students to do on their own. It uses interactive, evidence-based tools to teach the harms of e-cigarettes, explore use motives, manage stress, & support quitting.



## OUR Healthy Futures

**2-Hour Version** Facilitated in a small group setting with warm-up questions between slides for students to discuss.

**4-Hour Version** Builds on the 2-hour version by allowing time for personal reflection following each topic.

**NICOTINE & CANNABIS VERSION AVAILABLE**

01.

# EDUCATIONAL VIDEOS

# Becoming a Trusted Adult

*Foundations for More Effective Drug Education*



Stanford  
MEDICINE

REACH Lab

This **10 video YouTube course** teaches evidence-based skills to talk with teens about substance use. Instead of scare tactics, you'll learn how to build trust & have honest, supportive conversations that promote healthier choices.



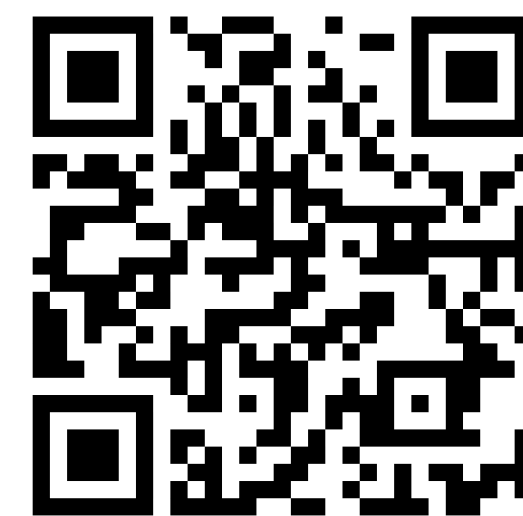
**NEW!**



**Stanford**  
MEDICINE

REACH Lab

Watch Now!





# Infographics

- Over **50 different** infographics and flyers are available for download on our website
- Spanish and Vietnamese versions available



ACCESS TODAY





## The Hidden Risks of Oral Nicotine and Smokeless Tobacco Products

### **Not So Sweet: The Hidden Risks of Oral Nicotine and Smokeless Tobacco Products**

A two-lesson curriculum on oral nicotine and smokeless tobacco products

This two-lesson, **evidence-informed** oral nicotine and smokeless tobacco curriculum is part of the [Tobacco Prevention Toolkit](#). A two-lesson curriculum on oral nicotine and smokeless tobacco, including prevention of nicotine pouches like Zyn.

Additionally, our lessons are mapped to the **National Health Education Standards**. Please see the links within each lesson to see the Standards associated with each lesson.

The goals of this curriculum are for adolescents to:



---

Identify different types of smokeless tobacco & oral nicotine products.



---

Explain the health risks linked to using smokeless tobacco & oral nicotine products.



---

Develop strategies to refuse all forms of tobacco and nicotine use.



---

Choose healthy alternatives over engaging in tobacco and nicotine use.



---

Understand how smokeless tobacco and oral nicotine companies target youth through various different marketing tactics.

# BITTER TASTE

LESSON 1

## HEALTH RISKS OF SMOKELESS TOBACCO AND ORAL NICOTINE PRODUCTS



Stanford  
MEDICINE

REACH Lab

NOT SO  
SWEET

Oral Nicotine & Smokeless  
Tobacco Curriculum

**Chew on This... Instead of Smokeless Tobacco or Oral Nicotine**



# The Real Cost of Oral Tobacco

Media &

MARKETING TATICS

*Lesson 2*







# Edits to the Curriculums?

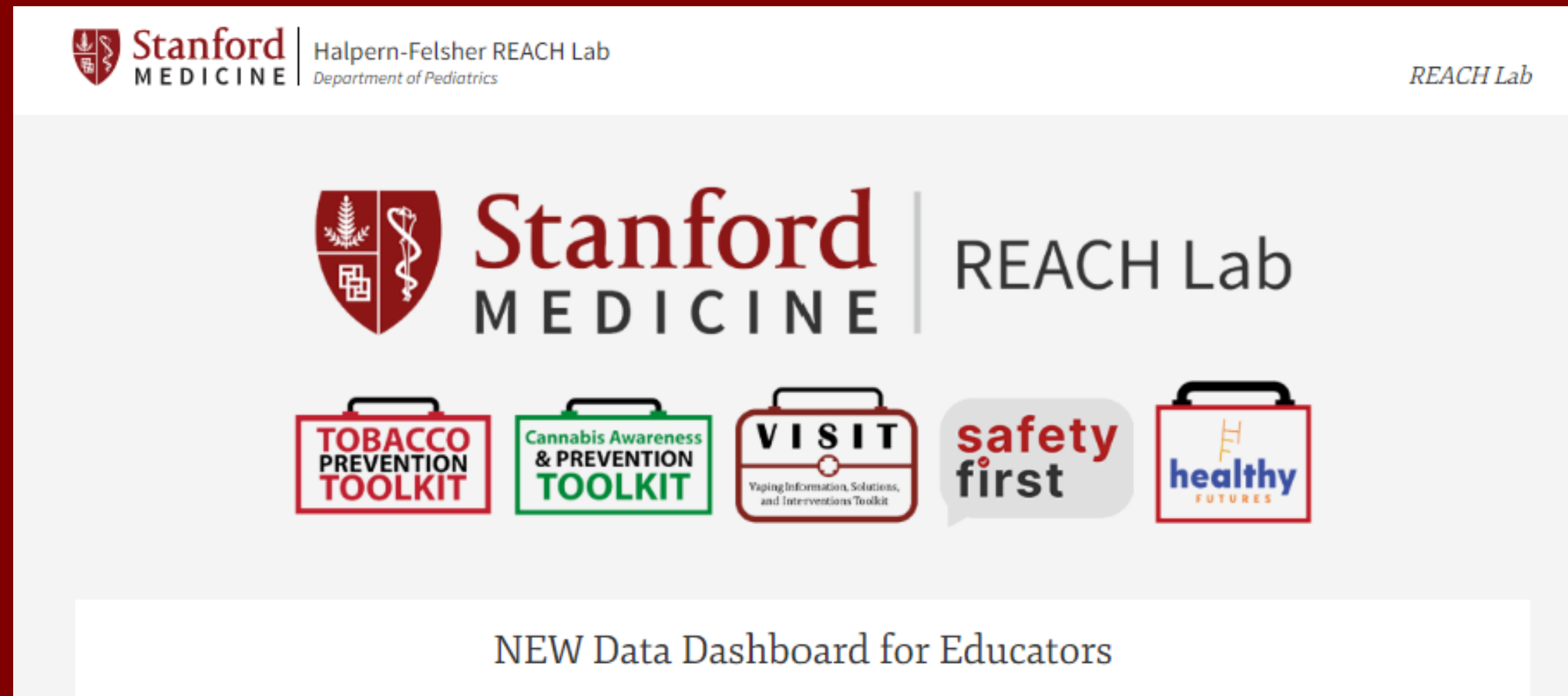
We recommend using the lessons as they are, but recognize that each classroom has different needs

Small changes to images and resource pages are acceptable, but larger changes to content require pre-approval from the REACH Lab

**Please do not remove or change any of our logos**



# Data Dashboard



[https://qrco.de/REACH -TEACH](https://qrco.de/REACH-TEACH)



Data Dashboard



Stanford  
MEDICINE

---

REACH Lab

# Community Talks with the REACH Lab...

*The following talks are for parents/guardians, healthcare providers, interested community members, and students*

- 1 Fentanyl Overdose Awareness: Critical Information Prevention**
- 2 Straight Talk About the Triangulum of Nicotine, Vaping and Cannabis**
- 3 Zyn and Other Nicotine Pouches: Trends, Risks, and Action Steps for Adults Who Support Youth**

*Upcoming Talks*



# 7<sup>TH</sup> ANNUAL VIRTUAL CANNABIS (AND OTHER DRUGS!) AWARENESS & PREVENTION CONFERENCE

TOBACCO | FENTANYL/OPIOIDS | ALCOHOL | HALLUCINOGENS



REGISTER  
TODAY!



[tinyurl.com/CanConfReg26](https://tinyurl.com/CanConfReg26)

OVER 70 WORKSHOPS!

## WHAT WILL YOU LEARN?

Learn how to educate youth regarding substances including health effects, how to work and intervene with current youth users, successful prevention strategies and curriculums (including harm-reduction), & the latest research on cannabis & other drugs.

Registration for this conference will include **access to ALL workshops and materials for one year after the conference.**

## WHO SHOULD ATTEND?

- Educators
- Community-based Organizations
- School Administrators
- Health Care Providers
- School Resource Officers
- Parents & Counselors
- Key Decision Makers

## COST:

\$125

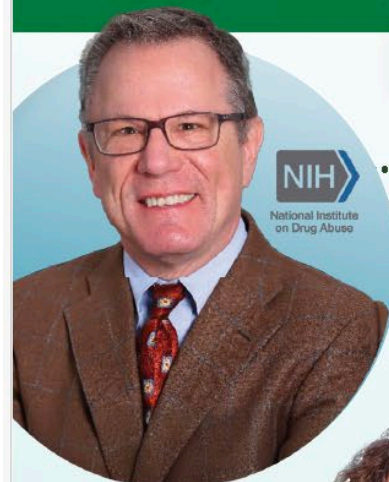
## DATE:



APRIL 22<sup>ND</sup> - 23<sup>RD</sup>,  
8:00 am-2:30 pm PDT

VIEW THIS YEAR'S CONFERENCE SCHEDULE!

[VIEW NOW!](#)



## DAY 1 KEYNOTE

**The Latest Science on Cannabis and Other Drugs from the National Institute on Drug Abuse (NIDA)**

Wilson M. Compton, M.D., M.P.E.

## AVAILABLE CREDITS:

This activity is approved for *AMA PRA Category 1 Credits™*, ANCC Contact Hours, ASWB Continuing Education (ACE) Credits, APA Continuing Education credits by the Stanford University School of Medicine.

For CME information, accreditation and disclosure information, please visit:

[stanford.cloud-cme.com/2026cannabisawarenes](https://stanford.cloud-cme.com/2026cannabisawarenes)

For more credit types including CEU & CHES®/MCHES® info, please visit:

[tinyurl.com/CanConfCredits26](https://tinyurl.com/CanConfCredits26)

*\*For all credit types, live attendance at this virtual conference is required. For eligibility and pricing, please visit [tinyurl.com/CanConfCredits26](https://tinyurl.com/CanConfCredits26).*



## DAY 2 KEYNOTE

**What Works and What Does Not: A Look at Alcohol, Tobacco, and Other Drug Prevention and Education Programs & Messaging**

Bonnie Halpern-Felsher, PhD, FSAHM  
Daren Khatib, MPH, MCHES, RDN  
Caroline DuPont, MD  
(Moderated by Ira Sachnoff, MA)



# Follow us on Social Media!



@stanfordreachlab



@stanfordreachlab  
@stanfordreachyab



[Tinyurl.com/REACH-LinkedIn](https://www.tinyurl.com/REACH-LinkedIn)



@stanfordTPT

@stanfordREACHLab

# Sign up for Our Newsletter and Any Questions



<https://qrco.de/bdiEwk>