



Central East (HHS Region 3)

ATTC

Addiction Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration



Central East (HHS Region 3)

MHTTC

Mental Health Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration



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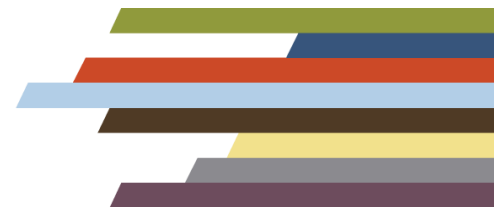
PTTC

Prevention Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration

Preventing Youth Vaping Part I: The Extent and Risk Factors for Youth Vaping

December 2, 2020

Thank you for joining us today.
We will begin promptly at **1PM** Eastern.



Technical Information

SAMHSA

Substance Abuse and Mental Health
Services Administration

This training was developed under the Substance Abuse and Mental Health Services Administration's **Addiction**, **Mental Health**, and **Prevention** Technology Transfer Center task orders.

For training use only.

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LIVE

This webinar is now live.



It is being recorded
and archived.



Please remain muted.



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Welcome

Central East ATTC, MHTTC, and PTTC Webinar

Preventing Youth Vaping Part I: The Extent and Risk Factors for Youth Vaping



*The Central East ATTC, MHTTC, and PTTC are housed at
the Danya Institute in Silver Spring, MD*

Renata Henry
Executive Director



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Each TTC Network includes 13 centers.*



Network Coordinating Office

National American Indian and Alaska Native Center

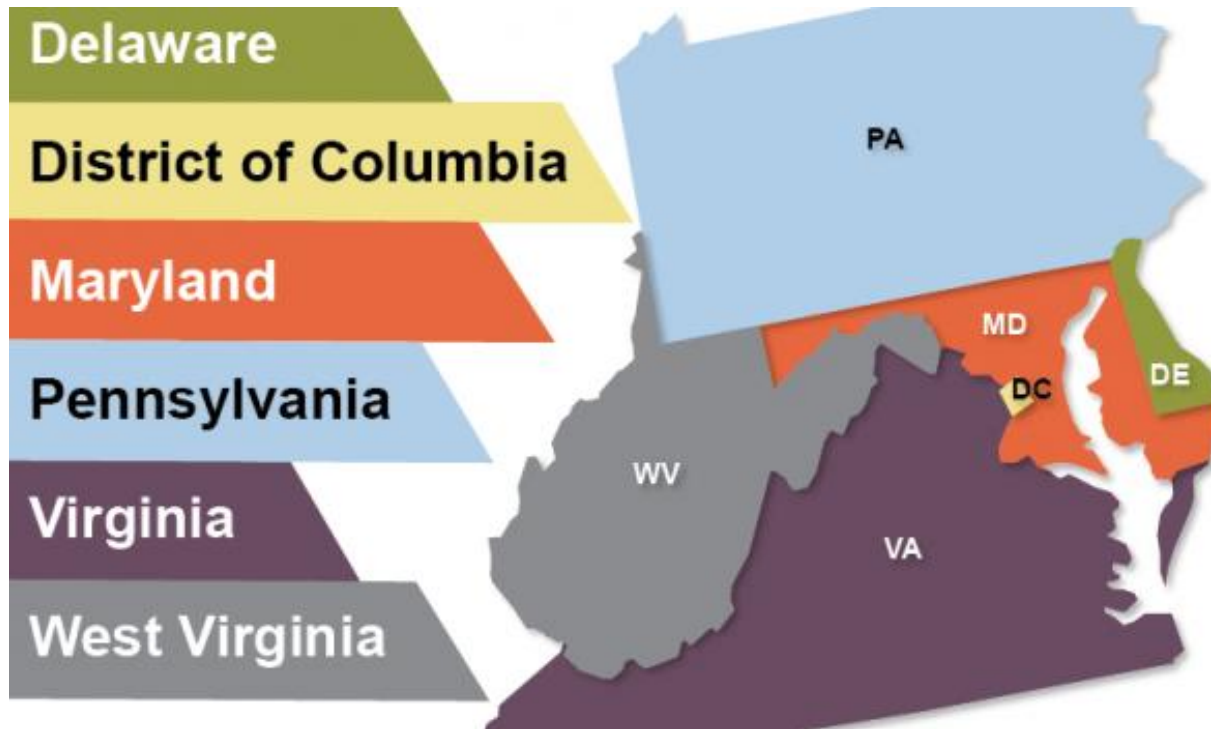
National Hispanic and Latino Center

10 Regional Centers (aligned with HHS regions)

**The ATTC Network also includes 4 international HIV centers funded by the President's Emergency Plan for AIDS Relief.*

Central East Region

HHS REGION 3



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Eligibility

Behavioral health and health care providers, consumers, families, state and local public health systems and other stakeholders

Consistent with Regional, State and Local Needs

No cost

Data Driven

EBPs provided by Subject Matter Experts



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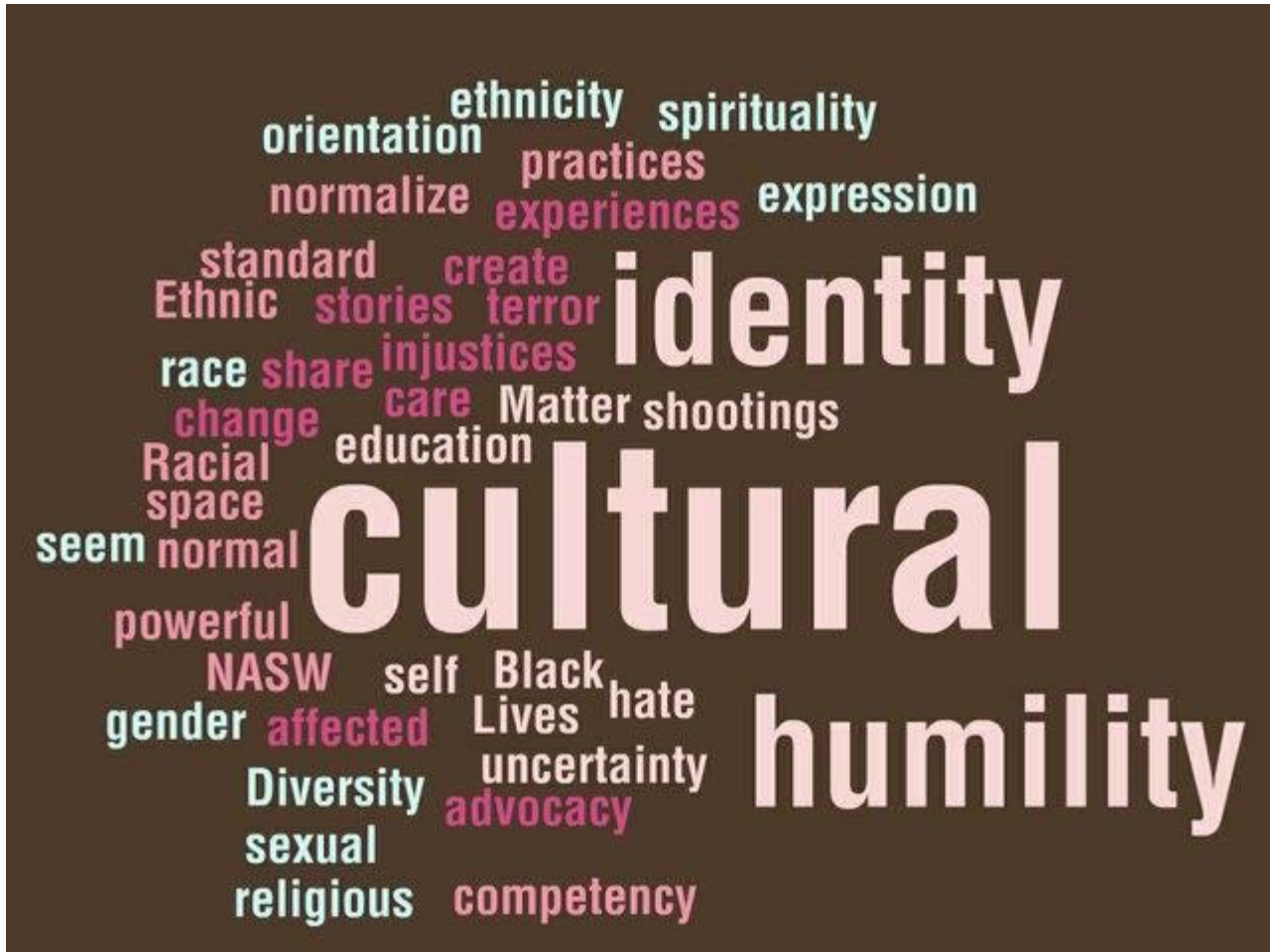
The use of affirming language inspires hope.

LANGUAGE MATTERS.

Words have power.

PEOPLE FIRST.

The PTTC Network uses affirming language to promote the application of evidence-based and culturally informed practices.





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Preventing Youth Vaping Part I: The Extent and Risk Factors for Youth Vaping

December 2, 2020

Josh Esrick

PTTC Prevention Specialist

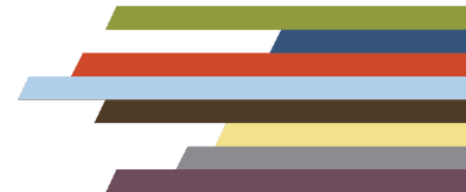
Senior Policy Analyst

Carnevale Associates, LLC

Emily Patton

Research Associate

Carnevale Associates, LLC



Presenters



Josh Esrick
Presenter



Emily Patton
Presenter



Key Objectives

- Explain the importance of youth vaping as a prevention priority
- Explore prevalence data on vaping, tobacco, and marijuana product use
- Discuss known risk factors for vaping use
- Identify areas where further research is required



Vaping Webinar Series

- Two-Part Series
 - Part I is today and focuses on the scope and importance of the problem
 - And what we know and do not know about the problem
 - Part II is next Tuesday (Dec. 15) and focuses on addressing the problem
 - Current public health responses; challenges; recommendations and promising practices



Background on Youth Vaping

- Increases in youth vaping rates present an urgent public health challenge
- Youth vaping threatens to undo decades of success in reducing youth tobacco use rates
- And may be helping to drive increases in youth marijuana use
- The 2019 acute lung injury epidemic reveals the additional risk of unknown dangers from vaping
- Research shows unique risk factors for vaping that must be addressed directly



Importance of Preventing Youth Vaping

- Data shows huge increases in rates of youth tobacco vaping
 - Far greater than the continued declines in tobacco use
- Rates of youth marijuana vaping also increasing, even more than the overall increases in cannabis use
- Vaping also presents many known and unknown dangers to youth



Dangers of Vaping

- While cigarettes may be more dangerous due to the huge number of carcinogens in them, vaping presents many dangers on its own
 - Both nicotine and Tetrahydrocannabinol (THC) exposure has been linked to negative health outcomes among youth (Callahan-Lyon, 2014; Weir, 2015)
 - Association between vaping nicotine and lung cancer found in study of mice (Tang, 2019)
 - Nicotine addiction from vaping can lead to future use of other tobacco products (AAP)



Dangers of Vaping, cont.

- Liquid nicotine presents an environmental hazard to infants and children (AAP)
- Vaping liquid contains chemicals untested for safety when inhaled (American Academy of Pediatrics; AAP)
- Many marijuana vaping products are illicitly produced and some have been linked to acute lung (CDC)
- Risk of the unknown due to the mostly unregulated and under-researched nature of vaping



Past Success in Youth Tobacco Prevention

- High school cigarette use declined 87% from 1997 to 2019 (Monitoring the Future; MTF)
 - Past-month prevalence declined from 28.3% to 3.7%
- High school smokeless tobacco use declined 68% from 1994 to 2019 (MTF)
 - Past-month prevalence declined from 9.7% to 3.1%
- Various cigar and hookah use data only collected since 2014, but all also show declines



Contrast With Vaping

- Importantly, all these declines are still occurring
 - Year-over-year declines in use of each tobacco product since 2009 (2014 for cigars and hookahs)
- Vaping is different
- From 2017 to 2019, past-month high school vaping increased (MTF):
 - From 12.0% to 22.5% for any vaping
 - From 7.5% to 18.1% for vaping nicotine
 - From 3.6% to 10.1% for vaping marijuana



Rising Marijuana Use

- High school marijuana past-month use rates have fluctuated over time due to various factors
- However, from 2016 to 2019 the rate increased from 16.0% to 17.9% (MTF)
- Marijuana vaping past-month use increased from 3.6% to 10.1% (2017 to 2019)
- Unknown to what extent vaping is driving marijuana use, versus it just being an avenue for use
 - Though initial evidence suggests peer marijuana vaping may be risk factor for current non-users (Pokhrel, 2020)



Other Vaping Data

- National Survey on Drug Use and Health (NSDUH) has not previously asked questions about vaping prevalence
- National Youth Tobacco Survey found even larger increases in high school vaping rates
 - From 11.7% in 2017 to 27.5% in 2019
- CDC Youth Risk Behavioral Surveillance System surveys have asked about vaping, but longer data lag
- We'll talk about other vaping data as we get to it in other sections of this and the second webinar



Perceptions of Vaping Harm

- Perceptions of harm around vaping an e-liquid with nicotine for students have historically been low (MTF, 2019)
 - Occasional Vaping, 16.4%-18.3% (2017)
 - Regular Vaping, 27%-32.7% (2017)
- There was a large increase in the perceived risk of regularly using nicotine vaping in 2019 among 8th-12th graders (MTF)
 - 35-42% considered vaping regularly a "great risk"
 - Younger students perceived greater risk of vaping compared to older students



Perceptions of Vaping Harm, cont'd

- Even with this increase, vaping is still among the lowest when compared to other substances for perceived risk (MTF, 2019)
- This could be because youth who vape do not always know how much nicotine they are consuming (Alexander et al, 2019)
- Also, youth report regularly hearing positive messages and attitudes towards vaping from friends and older family members who vape (Alexander et al, 2019)



Perceptions of Marijuana Harm

- Currently among the list of illicit drugs, marijuana has the lowest perceived risk (MTF, 2019)
- Among older students, its perceived level of risk has been on the decline for over a decade
 - In 2019, only 14% of 12th graders saw smoking marijuana occasionally as having a great risk
- In 2019, younger students who see great risk in experimental use of marijuana (i.e., 1-2x) was at the lowest rate ever recorded
 - 8th graders, 20%; 10th graders, 14%
- However, regular use of marijuana saw perceived harm risk levels range from 30%-51% among 8th-12th graders



Vaping Availability

- As of 2014 there were at least (Zhu et al, 2014):
 - **460** different vaping brands
 - **7,700** vaping flavors
- In addition to retailers (online and in-store) and social sources, there is a large black market for vaping and THC products (NIH, 2018)
- Many youth say vaping devices are “fairly easy” or “very easy” to get (MTF, 2019)
- Online purchasing – Vapes are very easy to buy compared to cigarettes (Tobacco-Free Kids, 2019)
- Synar checks are not automatic for vaping (SAMSHA, 2019)



Regulating Vaping

- Vaping refers to a multitude of products making it difficult to regulate
- For a long time there was also a lack of manufacturer-provided information (JUUL, 2019)
 - Ingredients
 - Design flaws
 - May be linked to toxic heavy metal in vaping liquids and other accidents (Hess, et al 2017)
- In 2016, FDA asserted the authority to regulate vapes as tobacco products (USFDA)
 - Banned sales to minors; advertising restrictions (Sharpless, 2019)



Regulating Vaping cont'd

- As of September 2020, the FDA now requires all vaping products to be reviewed before they are put on the market
- Prioritization of enforcement will occur for:
 - Any flavored, cartridge-based electronic nicotine delivery system (ENDS) product (other than a tobacco- or menthol-flavored ENDS product)
 - All other ENDS products for which the manufacturer has failed to take (or is failing to take) adequate measures to prevent minors' access
 - Any ENDS product that is targeted to minors or whose marketing is likely to promote use of ENDS by minors
 - Any ENDS product that is offered for sale after September 9, 2020, and for which the manufacturer did not submit a premarket application



Regulating Vaping cont'd

According to the Public Health Law Center, as of September 2020:

- 26 states and territories include e-cigarettes/vapes as a “Tobacco product” in at least one state level definition
- All states and territories, except for Am. Samoa, have laws restricting youth access to e-cigarettes/vapes
- 36 states and territories require a license for the retail sale of e-cigarettes/vapes



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Regulating Marijuana

- Marijuana use is illegal under Federal law, but State laws differ
 - 15 States and D.C. have legalized marijuana use as of November 2020
 - 20 States have legalized medical marijuana only use
 - In states where marijuana is not yet legal or only for medical use, many have removed jail time for possessing small amounts of marijuana
- Several states have enacted legislation that prohibits advertising of marijuana products to youth and buffer zones around youth-oriented locations



Marijuana and Vaping

- Vaping THC is the third-most popular way to use marijuana
- According to the Truth Initiative, in 2018, 4% of 8th graders, 12% of 10th graders, and 13% 12th graders reported vaping marijuana
 - Among college students 29% reporting ever using cannabis products as a vapor
- E-cigarette use predicts later marijuana use among youth, especially younger adolescents
 - Young e-cigarette users are 3.5x more likely to use marijuana than their peers who do not use e-cigarettes
- THC concentrations used in vaping devices can exceed that of dried cannabis by 4 to 30 times



Future Research Opportunities, 1

- Potential effectiveness of current prevention efforts
 - Current education and awareness campaigns
 - Existing regulations
 - Including Tobacco 21 implementation
 - Accuracy of retailer- and manufacturer-provided information
 - Adapting existing tobacco cessation programs to vaping
 - Addressing the perception of vaping as a tobacco cessation program for adults



Future Research Opportunities, 2

- Vaping risk factors and the characteristics that make them distinct from other tobacco product risk factors
 - What causes the lower perception of harm of vaping?
 - What caused the perception of vaping to be an attractive activity to engage in?
 - How effective were the unregulated ads targeting youth?
- Dangers of vaping
 - Some dangers are known, but many unknown risks remain



Future Research Opportunities, 3

- Identifying new prevention efforts
 - Expanding regulatory scope
 - FDA product manufacture regulations
 - Enforcing new and existing regulations
 - Synar and other retailer checks
 - Manufacturer inspections
 - Changing focus of education and awareness campaigns
 - Other strategies



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Moving Forward

- Much more research is needed on both the dangers of vaping and evidence-based approaches for preventing youth vaping
- However we do know some current approaches are likely to help, so long as they are fully implemented
- Next webinar we'll talk more about current and potential future public health responses to youth vaping



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Contact Us



Renata J. Henry, Director

rhenry@danyainstitute.org

info@danyainstitute.org

(240) 645-1145



Central East (HHS Region 3)

ATTC

Addiction Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration

Holly Ireland, ATTC Co-Project Director

hireland@danyainstitute.org



Central East (HHS Region 3)

MHTTC

Mental Health Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration

Oscar Morgan, MHTTC Project Director

omorgan@danyainstitute.org



Central East (HHS Region 3)

PTTC

Prevention Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration

Deborah Nixon-Hughes, PTTC Project Director

dhughes@danyainstitute.org