

The Senate
House of Representatives
The Thirtieth Legislature, Interim 2019
COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH
COMMITTEE ON CONSUMER PROTECTION AND COMMERCE

INFORMATIONAL BRIEFING

Thursday, October 17, 2019, 10:00 AM
State Capitol Conference Room 309

SEEKING SOLUTIONS TO END THE YOUTH VAPING EPIDEMIC



Hawaii's Youth Vaping Epidemic
Hawaii State Department of Health
Director Bruce S. Anderson, Ph.D.

Centers for Disease Control and Prevention

Exclusive use of nicotine containing products has been reported by some patients with lung injury cases, and many patients with lung injury report combined use of THC- and nicotine-containing products. Therefore, the possibility that nicotine-containing products play a role in this outbreak cannot be excluded.

National Outbreak of Lung Injury Associated with E-Cigarette Use, or Vaping

- 1299 cases of lung injury reported* 49 states, DC and U.S. Virgin Islands
- 26 deaths confirmed in 21 states



*As of 10/14/19, see CDC for updates; number is confirmed and probable cases
https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html

National Outbreak of Severe Lung Injury Associated with E-Cigarette Use or Vaping

What we know

- All reported cases have a history of using e-cigarette, or vaping, products.
 - Most patients have reported a history of using e-cigarette products containing THC.
 - Many patients have reported using THC and nicotine.
 - Some have reported the use of e-cigarette products containing only nicotine.

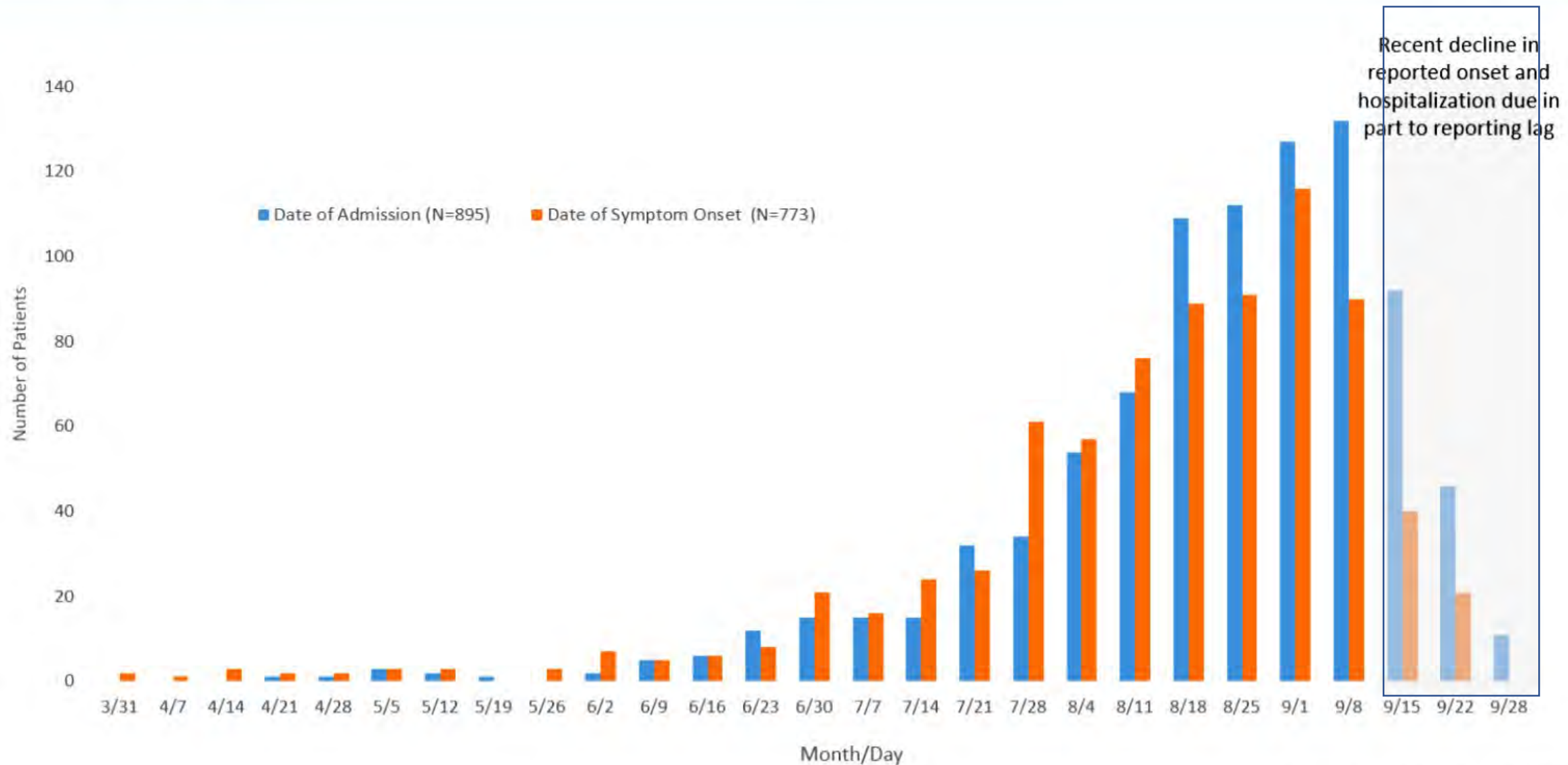
What we don't know

- We do not yet know the specific cause of these lung injuries; commonality among all cases is e-cigarette use.
- This outbreak might have more than one cause, and many different substances and product sources are still under investigation.

Symptoms reported by patients

- Cough, shortness of breath, or chest pain
- Nausea, vomiting, abdominal pain, or diarrhea
- Fatigue, fever, or weight loss

Dates of symptom onset and hospital admission for patients with lung injury associated with e-cigarette use, or vaping — United States, March 31–October 5, 2019



Hawaii State Department of Health Advisory

Medical Health Advisory: Probably Vaping-Associated Severe Respiratory Illness Case

September 10, 2019



- Ask your patients if they have used e-cigarette devices within the previous 90 days and whether they have symptoms of respiratory illness.
 - *Critical care specialists, pulmonologists, and hospitalists, especially, should be alert for signs of severe respiratory illness among patients who recently used vaping products, including e-cigarettes and THC products.*
 - Contact DOH immediately if you suspect you are managing a case of vaping associated respiratory illness



Hawaii State Department of Health Advisory

Medical Health Advisory: Probably Vaping-Associated Severe Respiratory Illness Case

September 10, 2019



- Oahu (Disease Reporting Line) 808-586-4586
- Maui District Health Office 808-984-8213
- Kauai District Health Office 808-241-3563
- Hawaii Island (Hilo) 808-933-0912
- Hawaii Island (Kona) 808-322-4877
- After hours Oahu 808-600-3625
- After hours Neighbor Islands 800-360-2575



Hawaii State Department of Health Advisory

Public Health Advisory: Urging Everyone to Stop Vaping October 10, 2019

- Do not use e-cigarettes or vaping devices of any kind. If you don't use vaping devices, don't start. If you are using vaping devices, stop
- If you choose to continue using vaping devices, do not use off-market products.
- Pregnant women should not use e-cigarettes and vaping products of any kind during pregnancy.



Hawaii State Department of Health Advisory

Public Health Advisory: Urging Everyone to Stop Vaping October 10, 2019



- Children and youth should never use e-cigarettes and vaping devices.
- If you have recently used a vaping device and are experiencing symptoms including coughing, shortness of breath, chest pain, nausea, vomiting, diarrhea, fatigue, fever, or abdominal pain, see a healthcare provider.
- If you are an adult using vaping devices to kick a cigarette habit, do not return to using cigarettes.

State of Hawaii

Current E-cigarette Users



16%

middle school
youth
currently
smoke
e-cigarettes



26%

high school
youth
currently
smoke
e-cigarettes



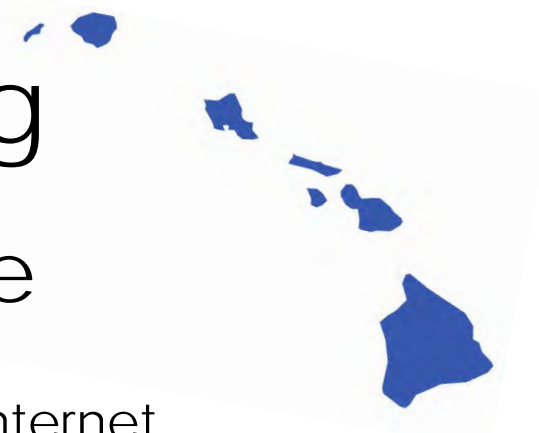
4.7%

adults
currently
smoke
e-cigarettes

(HS National Average: 13%)

State of Hawaii

Youth vaping is normalizing



Among youth

28% do not think e-cigarettes and vaping is dangerous

43.8% say that four of their closest friends are vaping

26.4% tried because of flavors such as mint, candy, fruit, or chocolate



Purchase

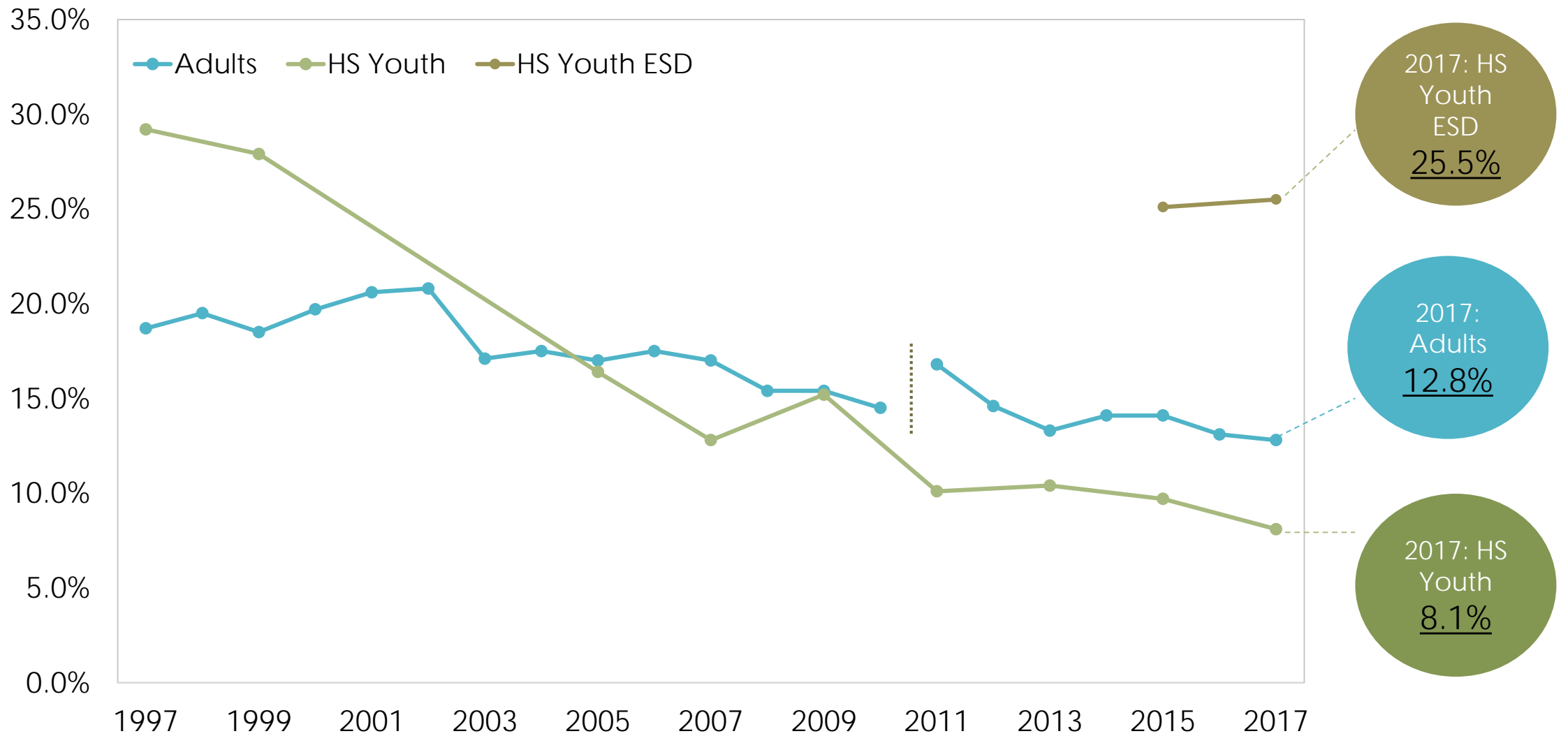
7.8% on internet

10.8% vape shops or stores only selling e-cigarettes

16.2% from a family member

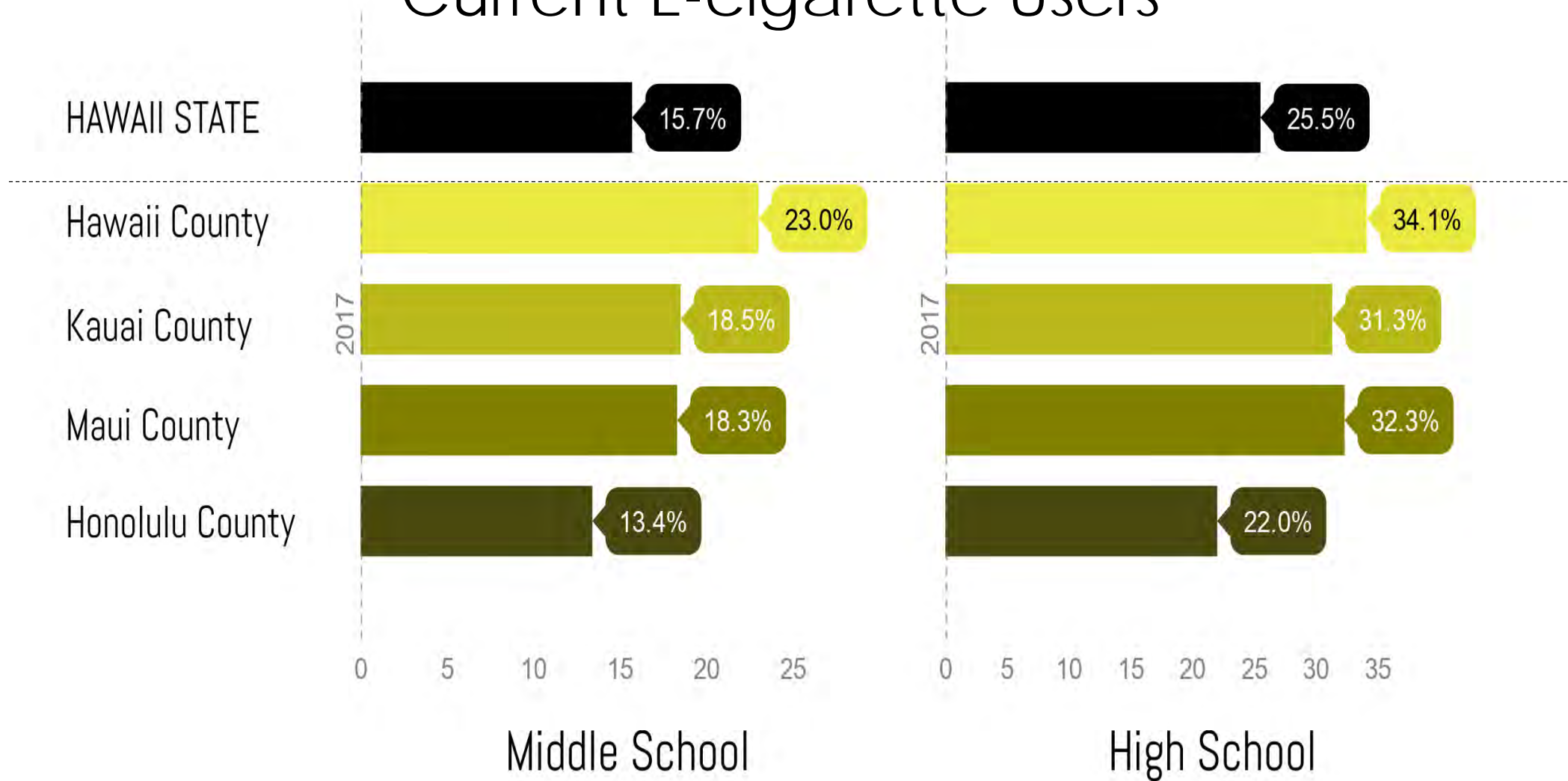
60% purchased e-cigarettes from a friend

Tobacco use among youth and adults. State of Hawaii



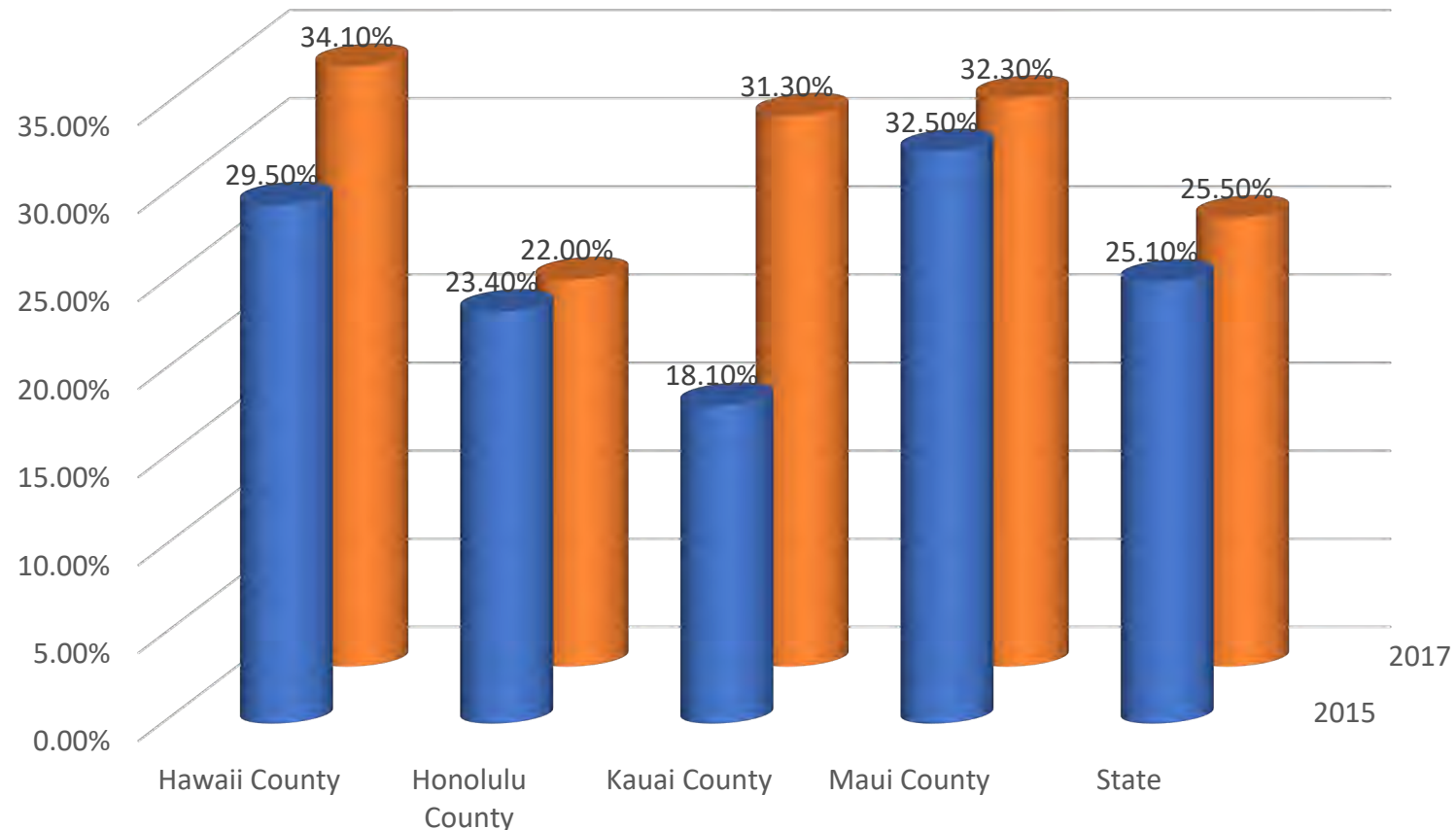
State of Hawaii

Current E-cigarette Users



Regular Use of E-cigarettes 2015, 2017 YRBS High School

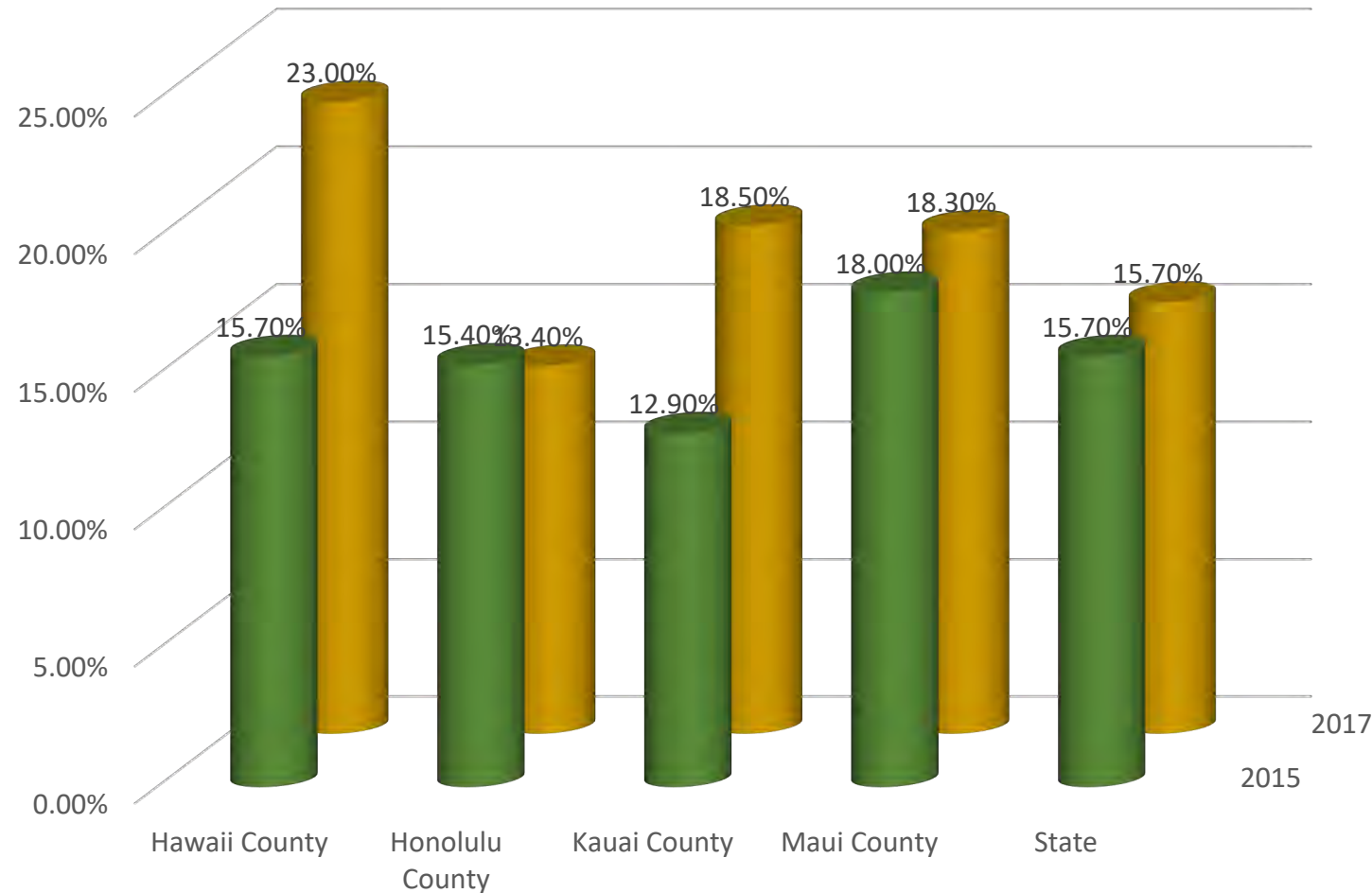
During the past 30 days, on how many days did you use an electronic vapor product? A current user is an individual who used an electronic vapor product at least once in the past month.



Compare to 13.2% US 2017 YRBS total, HI is 2nd highest in nation after CO.

Regular Use of E-cigarettes 2015, 2017 YRBS Middle School

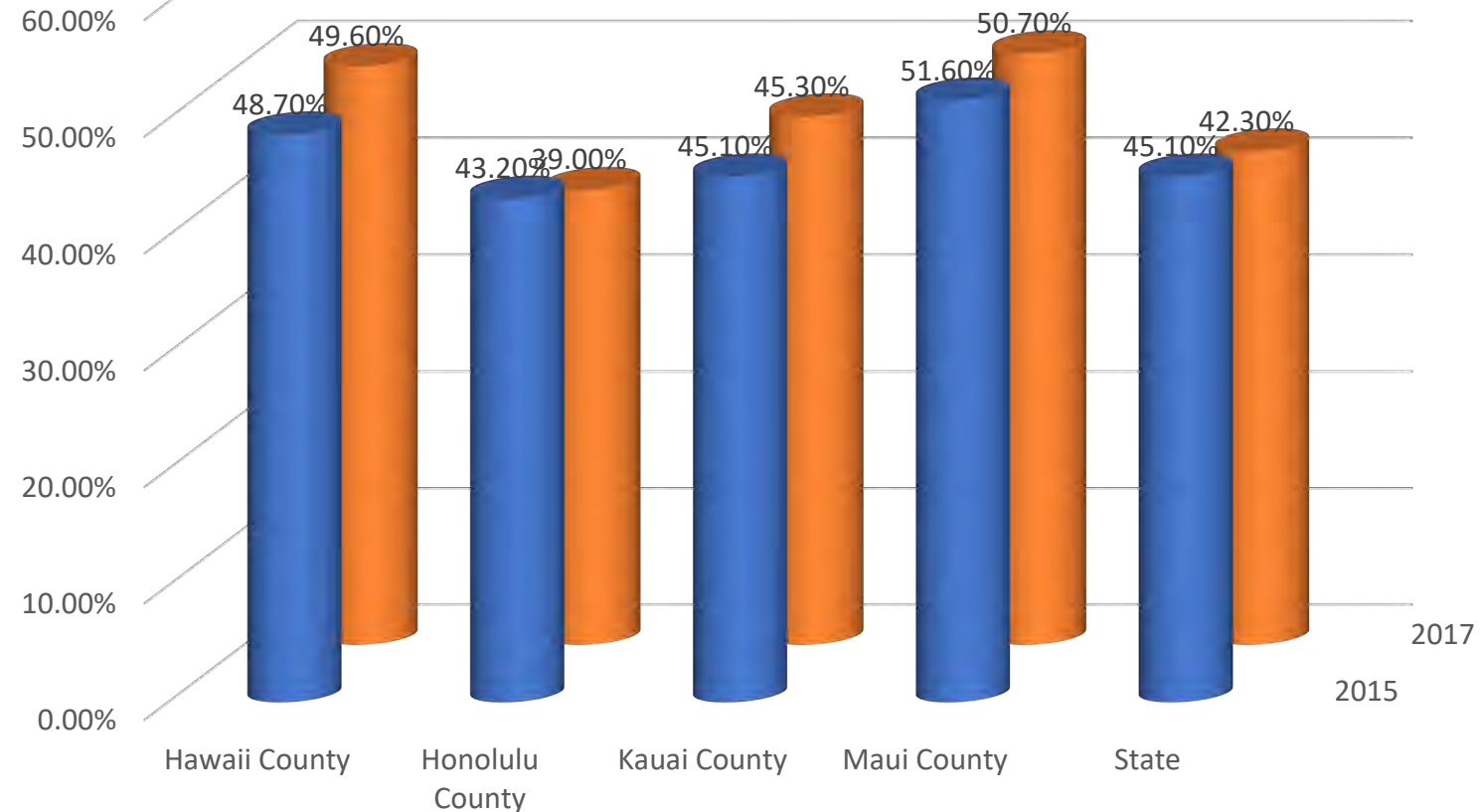
During the past 30 days, on how many days did you use an electronic vapor product? A current user is an individual who used an electronic vapor product at least once in the past month.



Across states that reported 2017 YRBS MS, Hawaii has highest MS ESD regular use rate.

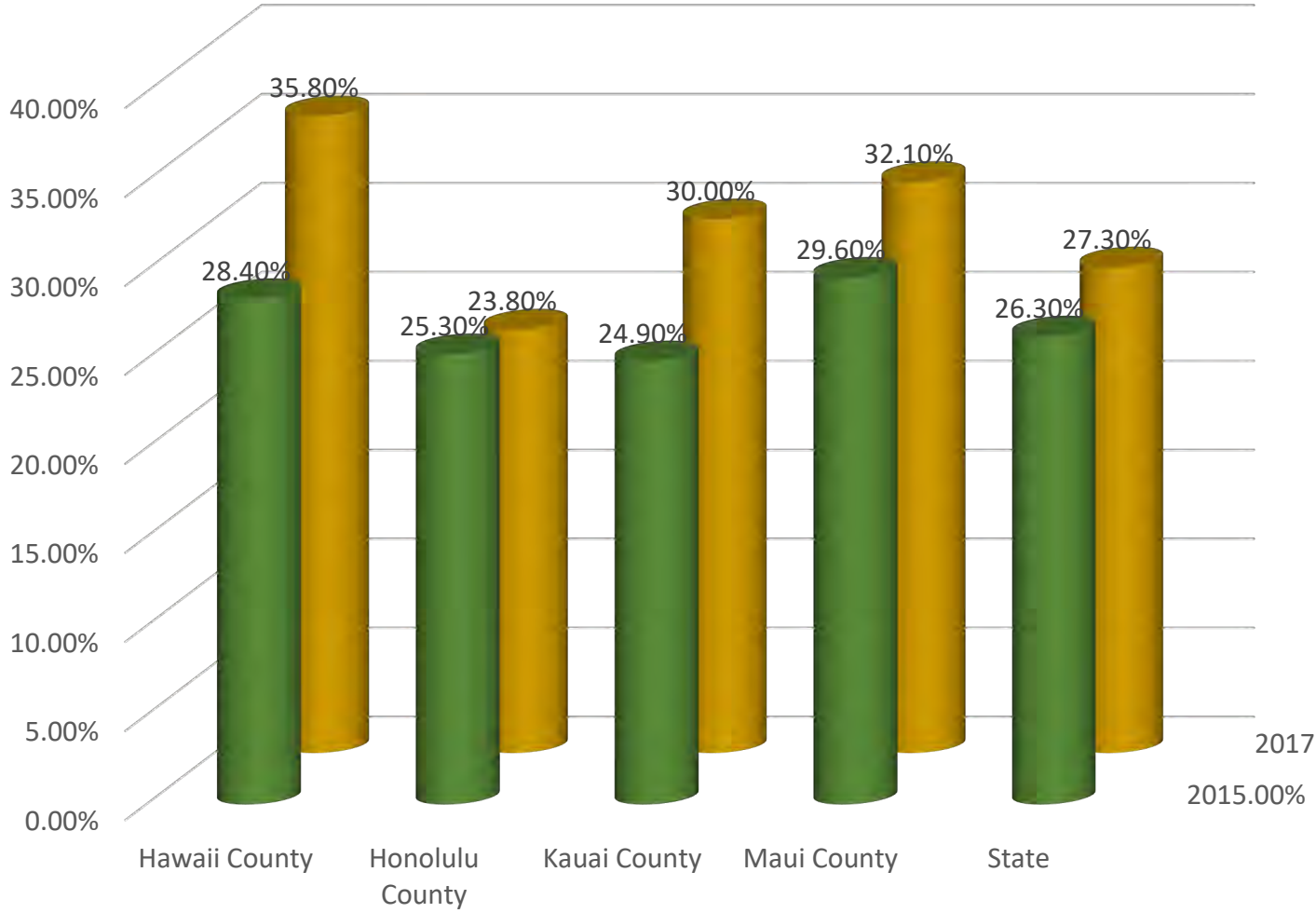
Experimenting with E-cigarettes 2015, 2017 YRBS High School

Students who ever used electronic vapor products (e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens such as blu, NJOY, or Starbuzz) Filter



Experimenting with E-cigarettes 2015, 2017 YRBS Middle School

Students who ever used electronic vapor products (e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens such as blu, NJOY, or Starbuzz) Filter



Generations of E-Cigarettes and Vaping Pens



Cig-a-Like

E-cigarettes came onto the market around 2007.

Most delivered nicotine and were disposable.

Variations

Variations on the first e-cigarettes included products like e-hookah and rechargeable versions.

Vape Pens

These have batteries that can reach higher temperatures, have refillable e-liquid cartridges, and allow users to regulate the frequency of inhalations.

Mods

Large size, modifiable e-cigarettes allow for more aerosol, nicotine, and other chemicals to be breathed into the lungs, at a faster rate.

Pod-Based

These e-cigarettes are shaped like USBs and contain pods with higher amounts of nicotine than previous generations.



The makers of PAX invite you to the
JUUL LAUNCH PARTY



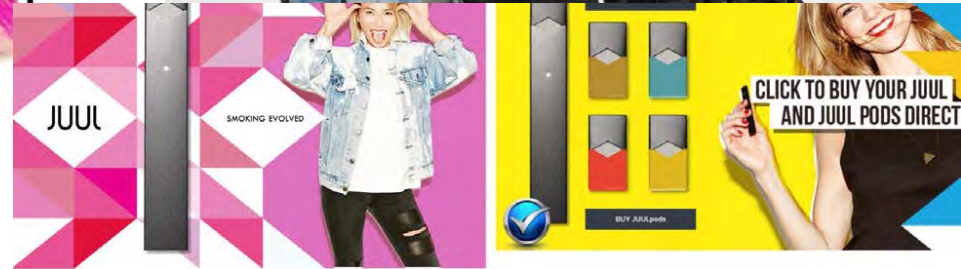
Thursday, June 4th | 7 - 11 PM | New York City

THE **JUUL** PRODUCT LAUNCH PARTY /
FROM THE MAKERS OF PAX

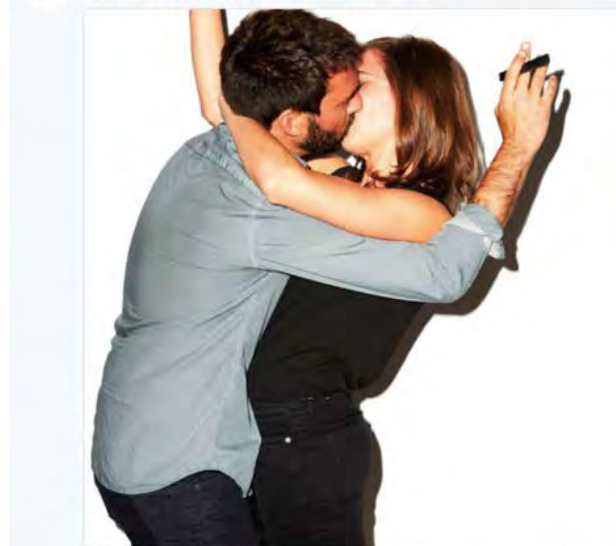


MUSIC BY
CHAPMAN / illuminati AMS / May Kwok
+ Special Guest Performance

JUUL @JUULvapor · 4 Jun 2015
#JUUL Vapor Love #LightsCameraVapor #Vaporized



JUUL @JUULvapor · 4 Jun 2015
Vapor love #JUUL #LightsCameraVapor #Vaporized



Online JUUL Marketing

~80.6% of JUUL Twitter followers were 13-20 years old

(Kim, A.E., et al. JAMA Pediatrics, 2019)

How Many Cigs Worth of Nicotine are in a Pod



tobaccopreventiontoolkit.stanford.edu

1 Pack of Cigarettes
≈20 mg of nicotine



=20
CIGARETTES



1 JUUL pod
≈41.3 mg of nicotine



≈41
CIGARETTES



1 PHIX pod
≈75 mg of nicotine



≈75
CIGARETTE
S



1 Suorin pod
≈90 mg of nicotine



≈90
CIGARETTE
S



E-Cigarette Use Among Youth and Young Adults, A Report of the Surgeon General, 2016

In summary, given the existing evidence from human and animal studies of the detrimental impact of nicotine exposure on adolescent brain development, the use of e-cigarettes by youth should be avoided and actively discouraged.

E-Cigarette Use Among Youth and Young Adults

A Report of the Surgeon General



U.S. Department of Health and Human Services

Department of Health Response

Education Sector Training and Resources

- DOH resources available online
- Stanford Tobacco Prevention Toolkit
 - Department of Education
 - Hawaii Association of Independent Schools
- State Public Charter School Commission

WHAT ARE E-CIGARETTES?

THE E-CIGARETTE INDUSTRY USES **FALSE ADVERTISING** WHEN IT SAYS THAT E-CIGARETTES HAVE "HARMLESS WATER VAPOR."

RESEARCH SHOWS THAT E-CIGARETTE VAPOR CAN CONTAIN CARCINOGENS SUCH AS:

**ARSENIC
CADMIUM BENZENE
LEAD CHROMIUM
NICKEL**

STEAM RABBIT 3.75 IN NOT A MARKER
SMOK 5.25 IN NOT A USB
JUUL 5 IN NOT A HIGHLIGHTER
SUORIN 3 IN NOT A HIGHLIGHTER

E-cigarettes are battery-powered smoking devices that operate by heating a liquid solution to produce an inhalable aerosol, often mistaken as water vapor. That is why using an e-cigarette is known as "vaping."

There are over 700 e-cigarette companies on the market. E-cigarettes go by many names and come in a variety of shapes and sizes, some **specifically marketed to children.**

25% OF HIGH SCHOOL YOUTH SAID THE AVAILABILITY OF FLAVORS IS A REASON THEY USE E-CIGARETTES³

STRAWBERRY LILIKOI LYCHEE LIME COTTON CANDY MANGO

EDUCATOR TIPS

TALK TO YOUR STUDENTS ABOUT VAPING

With the tremendous increase of youth using e-cigarettes and the intense marketing on local radio and online, it may seem that vaping is a safe alternative to cigarettes, but these products can cause serious health effects.

EDUCATOR TIP

DO NOT ACCUSE YOUR STUDENTS OF VAPING.

WHAT DO YOU KNOW ABOUT VAPING?

DO YOU HAVE FRIENDS THAT VAPE?

HAVE YOU SEEN ADVERTISEMENTS FOR VAPING PRODUCTS?

PEOPLE HAVE DIFFERENT REASONS FOR VAPING, DO YOU KNOW WHY SOME OF YOUR FRIENDS CHOOSE TO VAPE?

- ✓ Recognize that your students may already have first-hand observations or experiences to have opinions about vaping.
- ✓ Be positive, ask open-ended questions rather than repeat negative statements.
- ✓ Share YOUR concerns with your students, they will appreciate your care, even when speaking about products with potential harm.

EDUCATORS CAN:

- ✓ Learn about the different types of e-cigarettes and the risks of vaping for young people.
- ✓ Develop, implement, and enforce tobacco-free school policies.
- ✓ Teach youth about the risks of vaping.

HERE ARE THREE E-CIGARETTE CURRICULA THAT WERE DESIGNED USING THE NATIONAL HEALTH EDUCATION STANDARDS AND THE HEALTH EDUCATION CURRICULUM ANALYSIS TOOL

SCHOLASTIC PREVENTION PROGRAM: Get Smart about Tobacco | scholastic.com/get_smart_about_tobacco

CATCH PREVENTION PROGRAM: CATCH My Breath | catchinfo.org/modules/e-cigarettes

STANFORD TOBACCO PREVENTION TOOLKIT | med.stanford.edu/tobaccopreventiontoolkit/E-Cigs.html

CONSEQUENCES

KNOW THE RISKS, KNOW THE LAWS

Since 2016, Hawai'i State law has prohibited the sale or furnishing of tobacco products including ESDs and e-liquids to anyone under 21 years of age. It is also illegal for anyone under 21 to possess or use tobacco products or e-cigarettes. There is a \$500.00 fine for anyone who furnishes tobacco or e-cigarette products to anyone under the age of 21 (§712.1258 and §321.212 Hawai'i Revised Statutes)

VAPING COULD MEAN TROUBLE AT SCHOOL

Hawaii schools treat vaping devices as tobacco products, and they are considered contraband. Youth may be suspended or expelled for having them at school.

FOR ADDITIONAL RESOURCES & REFERENCES, VISIT:

HEALTHYHAWAII.COM/TOBACCO-FREE/VAPING

PARENTS CAN PREVENT AND REDUCE THE USE OF E-CIGARETTES BY YOUNG PEOPLE

TALK TO YOUR KIDS ABOUT VAPING

- With the tremendous increase of youth using e-cigarettes and the intense marketing on local radio and online, it may seem that vaping is a safe alternative to cigarettes, but these products can cause serious health effects.

PARENT TIP

DO NOT ACCUSE YOUR CHILD OF VAPING.

WHAT DO YOU KNOW ABOUT VAPING?

DO YOU HAVE FRIENDS THAT VAPE?

HAVE YOU SEEN ADVERTISEMENTS FOR VAPING PRODUCTS?

PEOPLE HAVE DIFFERENT REASONS FOR VAPING, DO YOU KNOW WHY SOME OF YOUR FRIENDS CHOOSE TO VAPE?

- ✓ Recognize that your child may already have first-hand observations or experiences to have opinions about vaping.
- ✓ Be positive, ask open-ended questions rather than repeat negative statements.
- ✓ Share YOUR concerns with your child, they will appreciate your care, even when speaking about products with potential harm.

PARENTS CAN:

- ✓ Learn about the different types of e-cigarettes and the risks of vaping for young people.
- ✓ Talk to their children about the risks of vaping among young people.
- ✓ Express firm expectations that their children remain tobacco-free.

CONSEQUENCES

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HEALTHYHAWAII.COM/TOBACCO-FREE/VAPING

Download the PDF of the parent tip sheet from the Centers for Disease Control and Prevention (CDC) at:



→ e-cigarettes.surgeongeneral.gov/documents/SGR_ECig_ParentTipSheet_508.pdf



**Talk to your kids
about the dangers
of vaping.**

*Just because it's sweet
doesn't mean it's safe.*

HawaiiNoVape.com



[HawaiiNoVape.com](https://hawaiiNOVape.com) Campaign to reach parents and adults about youth e-cigarette use

- HawaiiNoVape on digital and social media sites

https://youtu.be/yE0NE5X_4dA

<https://youtu.be/5geV5QzCALo>

- Digital ad message
 - Parents don't know about e-cigarette products because they aren't supposed to.
 - Online marketing and promotion is reaching our youth through smart phones.

Health Communications RFP

- Scope
 - Develop state-wide youth e-cigarette prevention campaign.
 - Promote the Hawaii Tobacco Quitline
- Hawaii Community Foundation RFP
www.hawaiicommunityfoundation.org/grants/open-applications
- Tobacco Prevention & Control Trust Fund



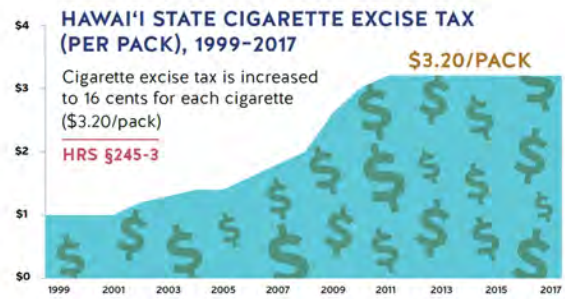
Hawaii Community Foundation Youth ESD Prevention Grant

Deadline Nov 5, 2019
Each grant ≤ \$40,000 for 12
months



- Purpose - to help prevent the initiation and use of e-cigarettes by Hawaii youth who are under 18 years of age.
- Must be community-based non-profit organizations.
- Apply online
www.hawaiicommunityfoundation.org/grants/open-applications
- Awards announced Dec 2019
- Hawaii Tobacco Prevention & Control Trust Fund

20 Years of Smoking Policy in Hawai'i



Smoking is prohibited at any state public housing project, elder/elderly household, or state low-income housing project

HRS §356D-6.5

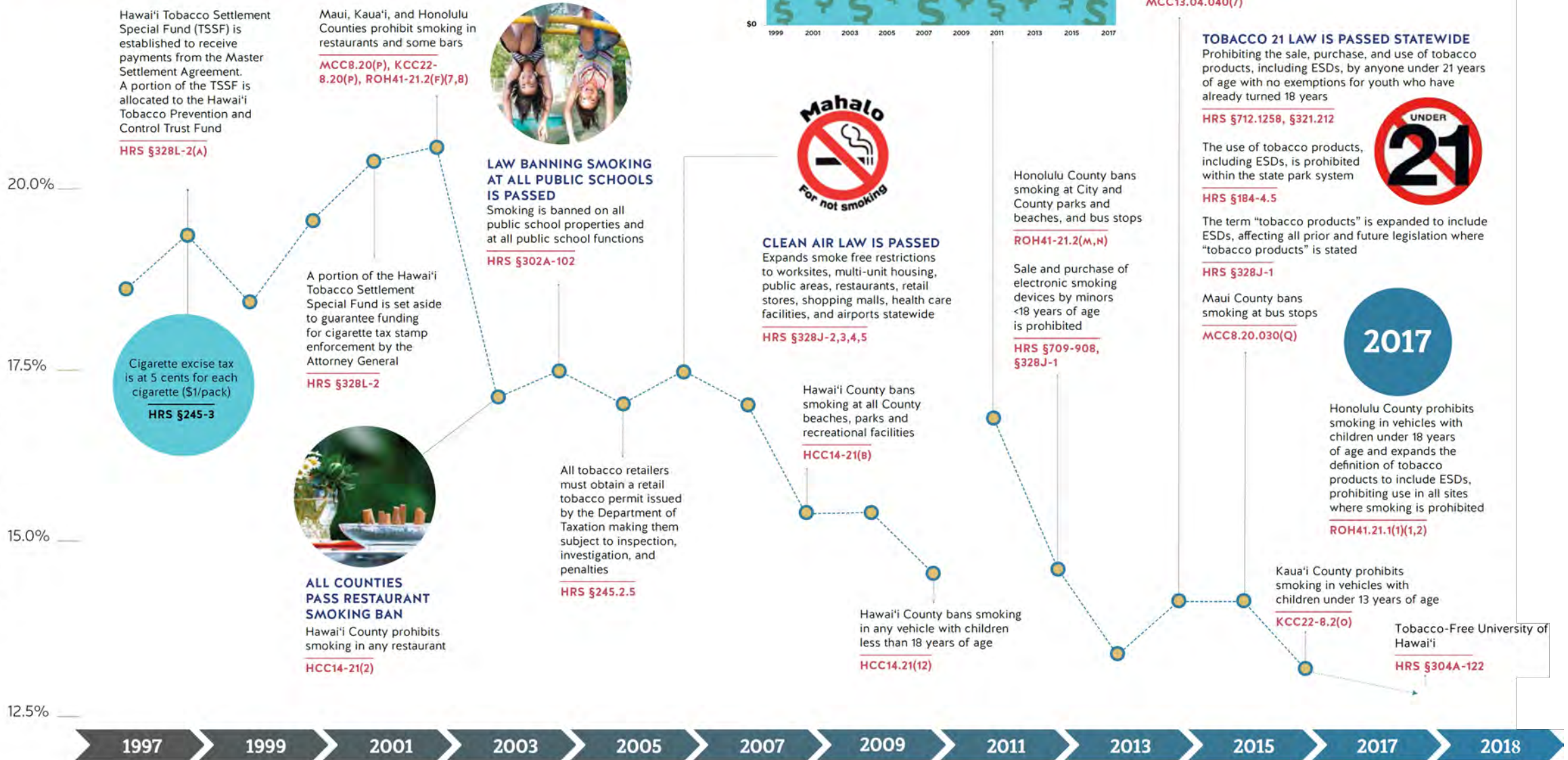
Hawai'i County prohibits the sale of tobacco products to anyone under the age of 21 years

HCC14-138(A)

Maui County bans smoking at county beaches, parks, and recreational facilities

MCC13.04.040(7)

CURRENT CIGARETTE SMOKING BY ADULTS (%) IN HAWAI'I



Hawai'i Tobacco Settlement Special Fund (TSSF) is established to receive payments from the Master Settlement Agreement. A portion of the TSSF is allocated to the Hawai'i Tobacco Prevention and Control Trust Fund

HRS §328L-2(A)

Maui, Kaua'i, and Honolulu Counties prohibit smoking in restaurants and some bars

MCC8.20(P), KCC22-8.20(P), ROH41-21.2(F)(7,8)



LAW BANNING SMOKING AT ALL PUBLIC SCHOOLS IS PASSED
Smoking is banned on all public school properties and at all public school functions

HRS §302A-102



CLEAN AIR LAW IS PASSED
Expands smoke free restrictions to worksites, multi-unit housing, public areas, restaurants, retail stores, shopping malls, health care facilities, and airports statewide

HRS §328J-2,3,4,5

Honolulu County bans smoking at City and County parks and beaches, and bus stops

ROH41-21.2(M,N)

Sale and purchase of electronic smoking devices by minors <18 years of age is prohibited

HRS §709-908, §328J-1

TOBACCO 21 LAW IS PASSED STATEWIDE
Prohibiting the sale, purchase, and use of tobacco products, including ESDs, by anyone under 21 years of age with no exemptions for youth who have already turned 18 years

HRS §712.1259, §321.212



The use of tobacco products, including ESDs, is prohibited within the state park system

HRS §184-4.5

The term "tobacco products" is expanded to include ESDs, affecting all prior and future legislation where "tobacco products" is stated

HRS §328J-1

Maui County bans smoking at bus stops

MCC8.20.030(Q)



Honolulu County prohibits smoking in vehicles with children under 18 years of age and expands the definition of tobacco products to include ESDs, prohibiting use in all sites where smoking is prohibited

ROH41.21.1(1)(1,2)

A portion of the Hawai'i Tobacco Settlement Special Fund is set aside to guarantee funding for cigarette tax stamp enforcement by the Attorney General

HRS §328L-2



ALL COUNTIES PASS RESTAURANT SMOKING BAN
Hawai'i County prohibits smoking in any restaurant

HCC14-21(2)

All tobacco retailers must obtain a retail tobacco permit issued by the Department of Taxation making them subject to inspection, investigation, and penalties

HRS §245.2.5

Hawai'i County bans smoking at all County beaches, parks and recreational facilities

HCC14-21(B)

Hawai'i County bans smoking in any vehicle with children less than 18 years of age

HCC14.21(12)

Kaua'i County prohibits smoking in vehicles with children under 13 years of age

KCC22-8.2(o)

Tobacco-Free University of Hawai'i

HRS §304A-122

1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2018

SOURCE: Hawai'i State Department of Health, Behavioral Risk Factor Surveillance System, 1997-2016

State of Hawaii

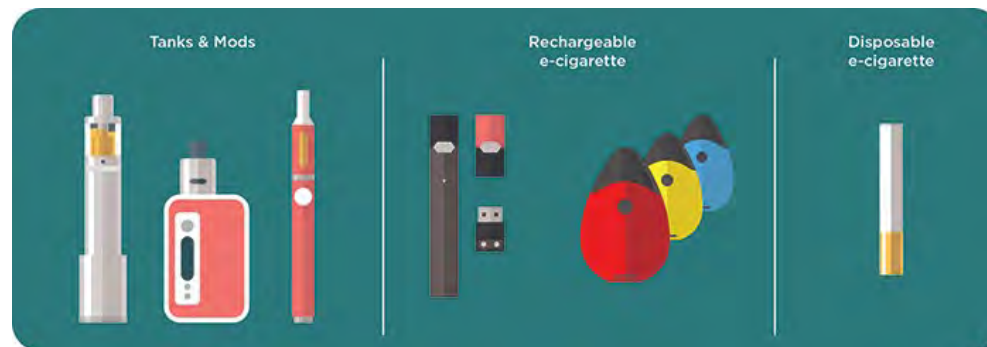
Tobacco Prevention Policy Parity

Cigarettes

- ✓ No online sales, shipping, and delivery
- ✓ No candy & fruit flavored cigarettes
- ✓ Additional tax, permitting, and licensing

E-Cigarettes

- Online sales, shipping, and delivery allowed
- Flavored e-cigarettes allowed
- No additional tax, permitting or licensing required





Mahalo

Resources for Parents and Teachers

Samples of Online Resources

- <https://ehhs://med.stanford.edu/to/baccopreventiontoolkit.html>
- https://www.cdc.gov/tobacco/products/e-cigarettes-surgeongeneral.gov/documents/SGR_ECig_ParentTipSheet_508.pdf
- <https://truthinitiative.org/research-resources/emerging-tobacco-products/e-cigarettes-facts-stats-and-regulations>
- <https://www.tobaccofreekids.org/what-we-do/industry-watch/e-cigarettes>

Current generation of e-cigarettes



Data Sources

BRFSS (Behavioral, Risk, Factor SurveillanS System)

- largest ongoing national telephone survey
- adults (18+ years)

YRBS (Youth Risk Behavior Survey)

- biennially every odd year (e.g. 2017, 2019...)
- youth in public middle and high schools

YTS (Youth Tobacco Survey)

- biennially every odd year
- youth in public middle and high schools

Update on the Cases of Severe Pulmonary Disease Associated with E-Cigarette Use

Bryan Mih, MD MPH FAAP

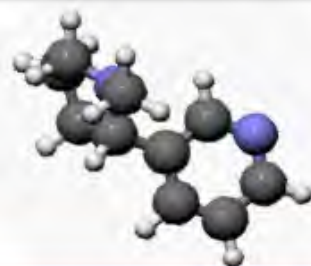
Pediatrician, Board-Certified
Medical Director, Kapi'olani Smokefree Families
Assistant Clinical Professor, Pediatrics, John A. Burns School of Medicine
Tobacco Control Chair, American Academy of Pediatrics, Hawaii Chapter
American Academy of Pediatrics, Section on Tobacco Control, Executive Committee
Hawaii Public Health Institute, Board of Directors

Acknowledgements

- Kevin Ramirez, Hawaii Public Health Institute, 808NoVape
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- Forrest Batz, PharmD, Board of Directors, Hawaii Public Health Institute
- Brian A. King, PhD, MPH, Deputy Director for Research Translation, Office on Smoking & Health, Centers for Disease Control
- Julius B. Richmond Center of Excellence & Section on Tobacco Control, American Academy of Pediatrics

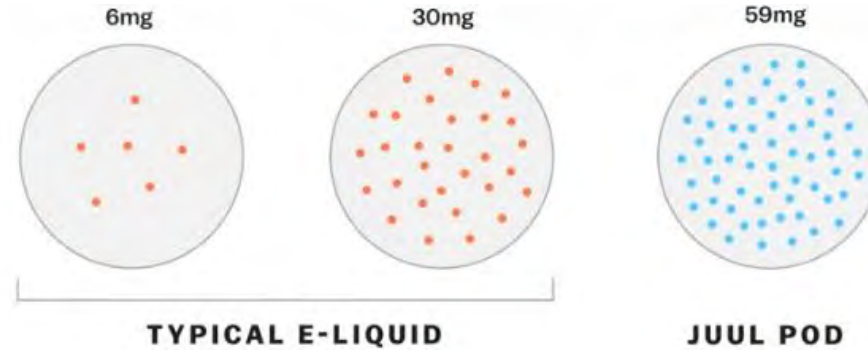
Risks of electronic nicotine devices

Nicotine



- **Highly addictive** substance
- Causes changes in brain chemistry – stimulates 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)

Nicotine base vs salts



nicotine base

nicotine salts

0 - 36 mg
nicotine
per mL

59 mg
nicotine
per mL

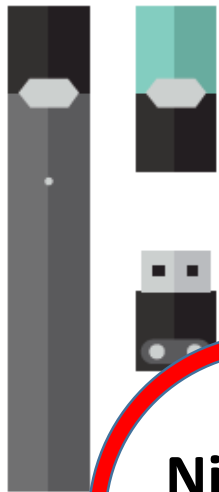


Nicotine salts allow particularly high levels of nicotine to be inhaled more easily and with less irritation than free base nicotine

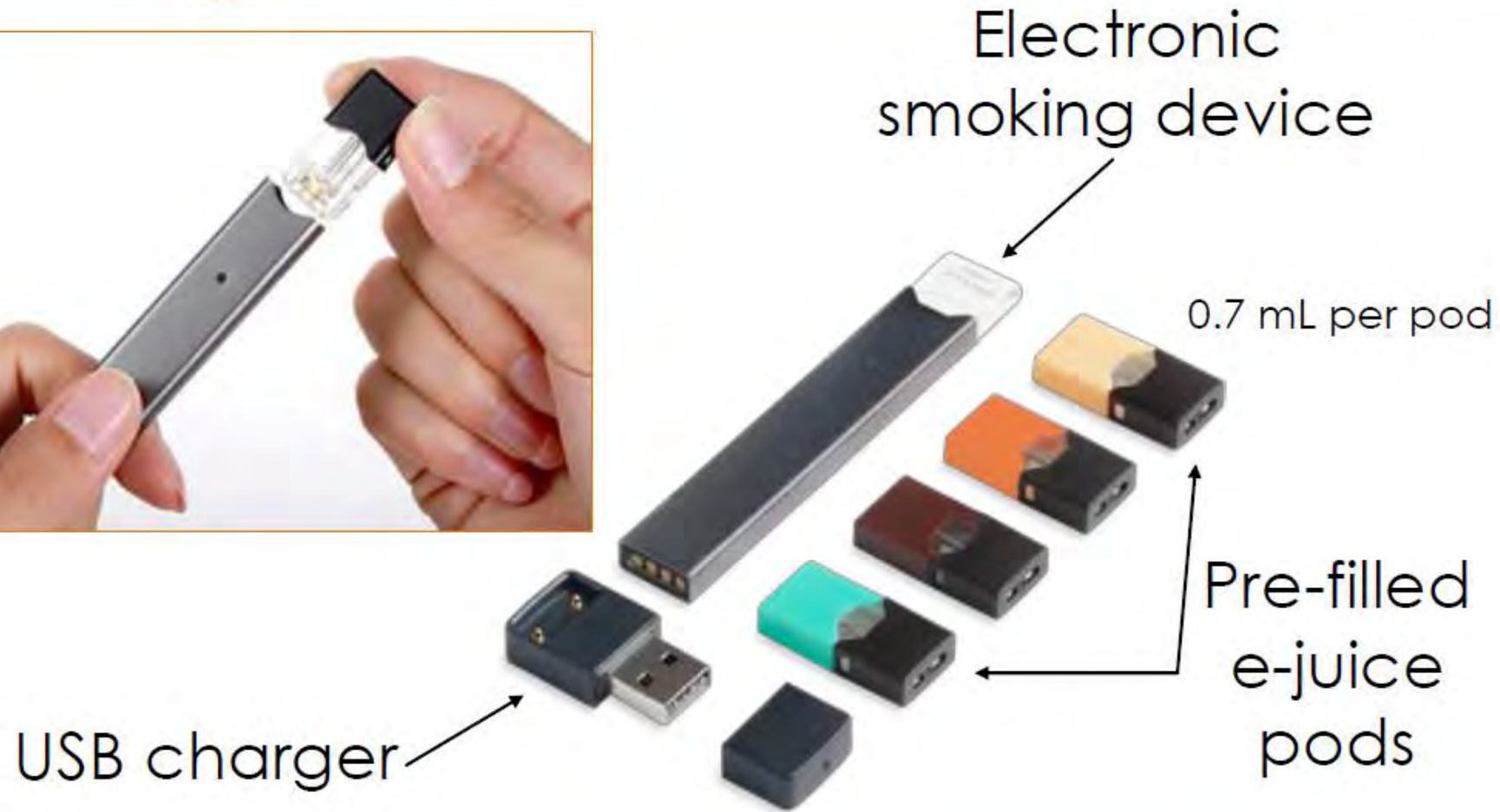


“You can vape higher nicotine salt strengths without that rough throat hit”

[Liquid Nicotine Wholesalers]



Pod-Based ESDs



Nicotine Content of Pods



tobaccopreventiontoolkit.stanford.edu

1 Pack of Cigarettes
≈20 mg of nicotine



≈20
CIGARETTES



1 JUUL pod
≈41.3 mg of nicotine



≈41
CIGARETTES



1 PHIX pod
≈75 mg of nicotine



≈75
CIGARETTES



1 Suorin pod
≈90 mg of nicotine

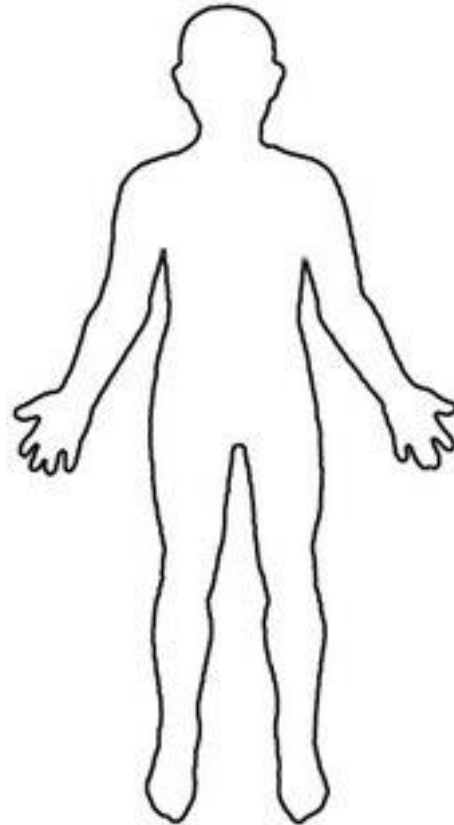


≈90
CIGARETTES



The Body When Vaping

Rewires and
changes the
brain



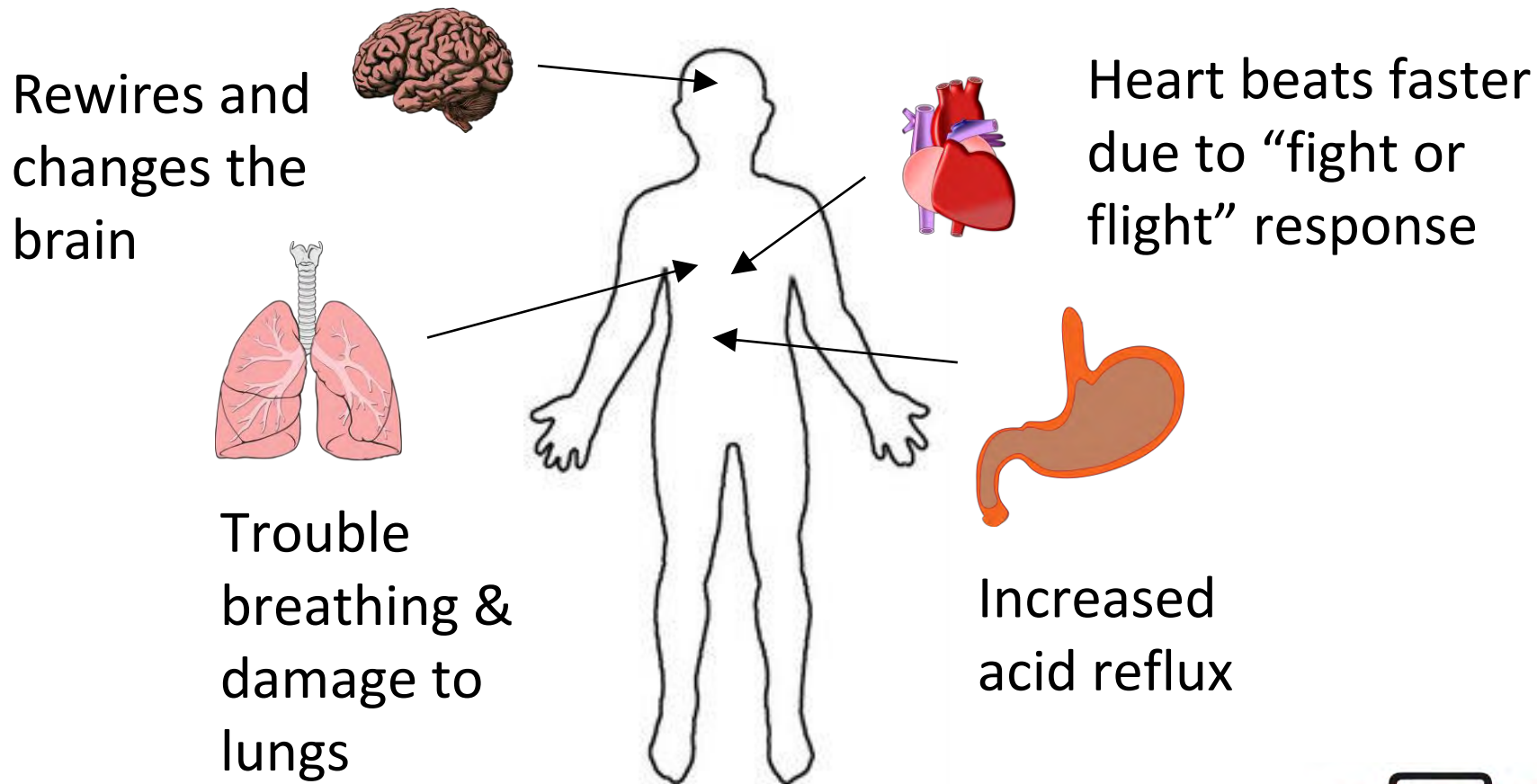
Nicotine's impact on the developing brain

- Highly addictive
- Excess amounts can be lethal.
- **Adversely affects brain development until mid-20s.** Young people who use nicotine are at risk for long-lasting effects of exposing their developing brains to nicotine:
 - Nicotine disrupts the development of brain circuits that control attention and learning
 - Makes it harder to control impulses.
 - Learning and cognitive deficits
 - Mood disorders
 - Permanent lowering of impulse control.
 - Nicotine affects the development of the brain's reward system, making the brain more susceptible to addiction to other drugs such as cocaine and methamphetamine

Nicotine

- JUUL can **deliver nicotine 2.7 times faster** than other e-cigarettes, increasing the risk of addiction

The Body When Vaping



Ingestion vs. Inhalation

Propylene glycol, vegetable glycerine and other e-juice ingredients may be approved as safe for *use in foods*...
NOT approved as safe for **inhaling**



The Solvent—Propylene Glycol

The Solutes—Flavoring Agents

- These things are FDA-approved, so they should be safe, right? Depends on how they enter the body:
 - Propylene glycol and some flavoring agents have been FDA-approved for **ingestion**
 - They have been found to be irritants when **inhaled**.
- The contents of e-cigarettes are not regulated—what is promised on the package may not be what's inside:
 - Some ingredients can be carcinogenic
 - Metals such as tin, nickel, and lead have been found

Nicotine-free e-cigarettes can damage blood vessels

Single instance of vaping immediately leads to reduced vascular function

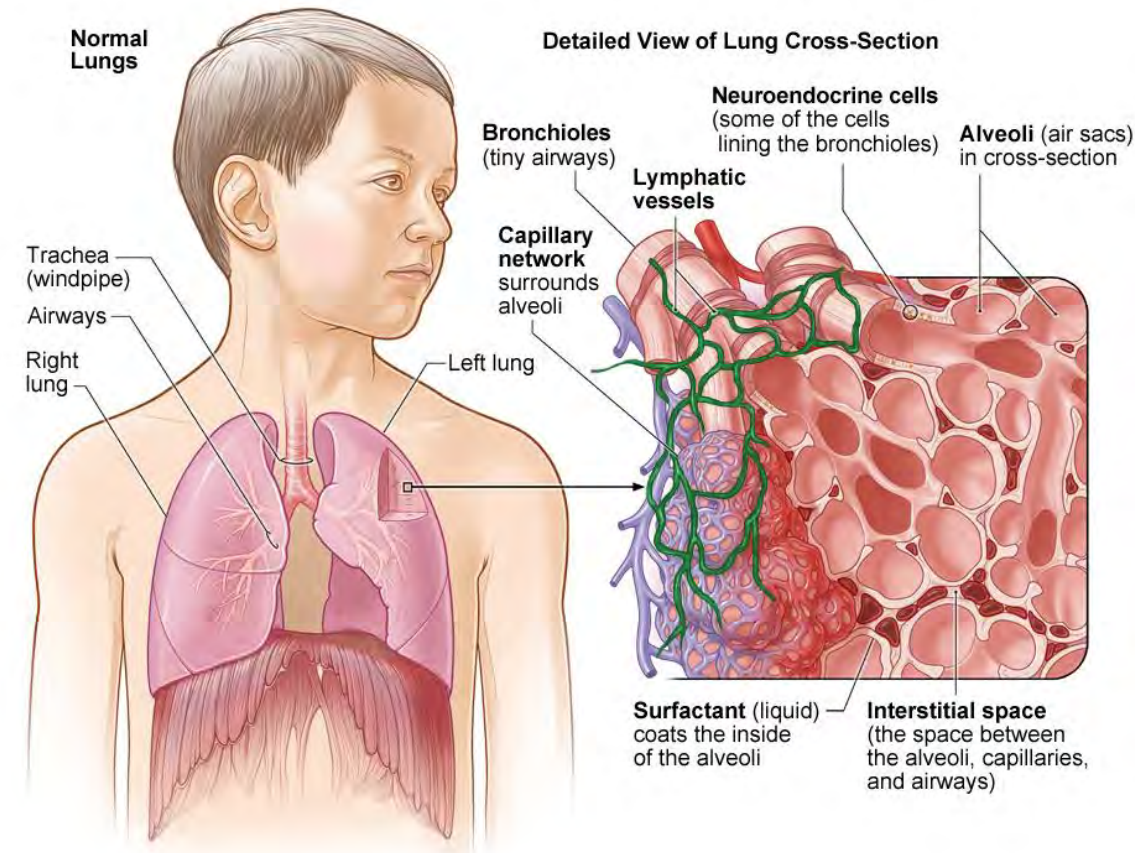
Date: August 20, 2019

Source: University of Pennsylvania School of Medicine

Summary: A Penn study reveals single instance of vaping immediately leads to reduced vascular function.



- When glycerol and propylene glycol are heated and inhaled, then pass into the pulmonary arteries and veins.
- Once there, they irritate the epithelium, a thin layer of cells that lines blood vessels and regulate blood flow, clotting, and immune responses.
- This alters the ability of the arteries to expand and contract.



It's Aerosol not Water Vapor

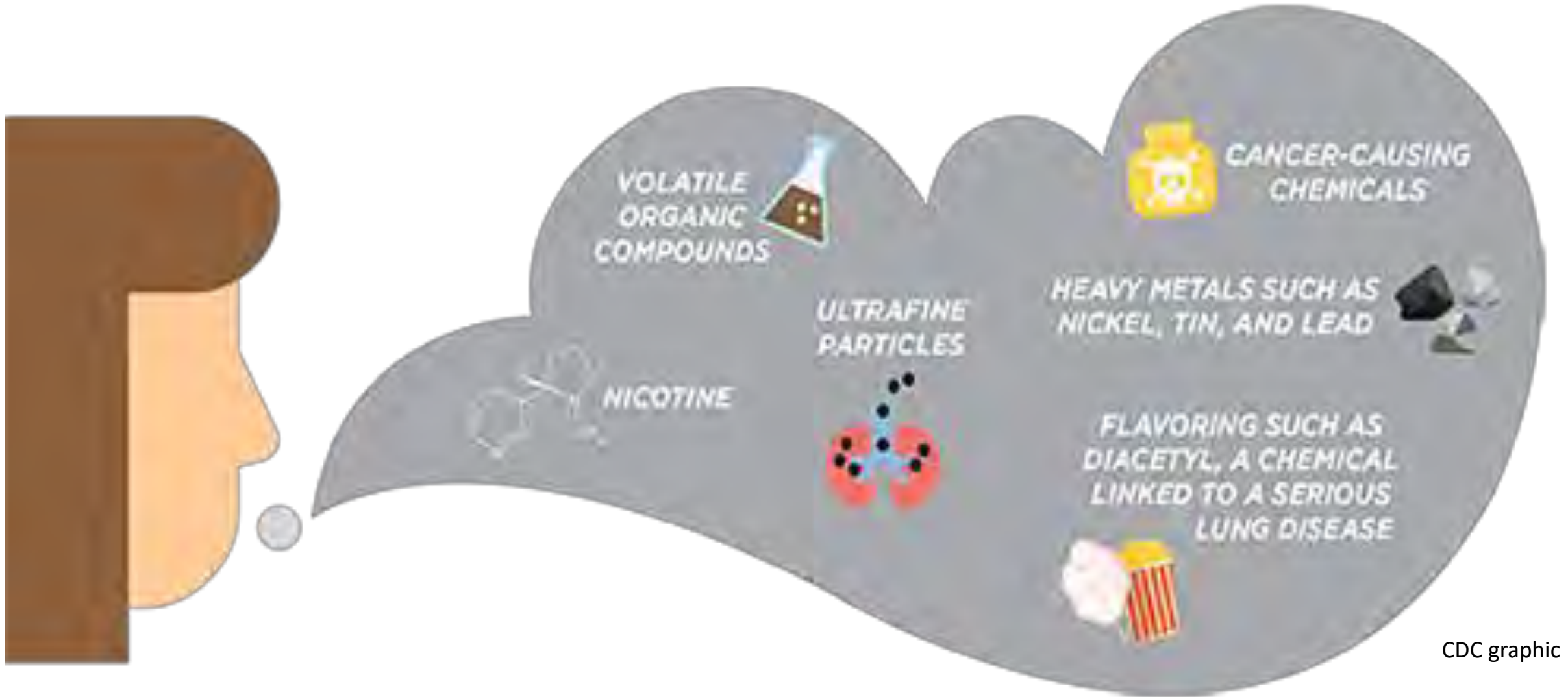


Vape aerosol- mixture of many different tiny chemical droplets and particles suspended in the air, some present in e-juice, others produced during e-cig heating process



Evaporated water

What's in the aerosol?



Flavourings significantly affect inhalation toxicity of aerosol generated from electronic nicotine delivery systems (ENDS).

Leigh NJ, Lawton RI, Hershberger PA, et al
Tobacco Control 2016;25:ii81-ii87.

Certain e-cigarette flavors can irritate the airways:

- Benzaldehyde—cherry flavored liquids
- Cinnamaldehyde—cinnamon flavor
- Diacetyl—buttery flavor
 - Can cause “popcorn lung”—bronchiolitis obliterans
 - Supposedly phased out by “reputable” manufacturers

Formation of flavorant–propylene Glycol Adducts With Novel Toxicological Properties in Chemically Unstable E-Cigarette Liquids

Hanno C Erythropel, Sairam V Jabba, Tamara M DeWinter, Melissa Mendizabal, Paul T Anastas, Sven E Jordt, Julie B Zimmerman. *Nicotine & Tobacco Research*, 18 October, 2018
Duke University and Yale's Tobacco Center of Regulatory Science

- When certain flavors are mixed with propylene glycol, they produce **acetals** that **irritate airways and lungs**.
 - Flavor aldehydes included benzaldehyde, cinnamaldehyde, citral, ethylvanillin, and vanillin
 - Propylene glycol is the most common e-liquid solvent
 - Acetals remained stable in physiological aqueous solution, with half-lives above 36 hours, suggesting they **persist when inhaled** by the user.
 - Acetals activated TRPA1 and TRPV1 irritant receptors in the airways—these lead to chronic cough and inflammation

Adolescent Exposure to Toxic Volatile Organic Chemicals From E-Cigarettes

Mark L. Rubinstein, Kevin Delucchi, Neal L. Benowitz, Danielle E. Ramo
Pediatrics. April 2018, VOLUME 141 / ISSUE 4

- Urine was analyzed for metabolites of a panel of 8 VOCs that are toxic environmental or tobacco smoke constituents: benzene, 1,3-butadiene, ethylene oxide, acrylonitrile, acrolein, propylene oxide, acrylamide, and crotonaldehyde.
- The participants were 16.4 years old on average.
- Adolescent e-cigarette-only users had levels of 5 VOC toxicants detected in their urine in quantities up to 3 times greater than in matched controls, including metabolites of **acrylonitrile**, acrolein, **propylene oxide**, **acrylamide**, and **crotonaldehyde**. (known carcinogens boldfaced)
- Levels of toxicant exposure in dual users were up to 3 times higher than in those who used only e-cigarettes.
- The use of fruit-flavored products produced significantly higher levels of the metabolites of acrylonitrile

Association Between Initial Use of e-Cigarettes and Subsequent Cigarette Smoking Among Adolescents and Young Adults: A Systematic Review and Meta-analysis

[Samir Soneji, PhD^{1,2}](#); [Jessica L. Barrington-Trimis, PhD³](#); [Thomas A. Wills, PhD⁴](#); et al
JAMA Pediatr. 2017;171(8):788-797. doi:10.1001/jamapediatrics.2017.1488

- **Question** Is there an association between e-cigarette use and cigarette smoking among adolescents and young adults?
- **Finding** A systematic review and meta-analysis showed strong and consistent evidence of an association between initial e-cigarette use and subsequent cigarette smoking initiation, as well as between past 30-day e-cigarette use and subsequent past 30-day cigarette smoking.
- **Summary:** This meta-analysis of 9 longitudinal studies found that e-cigarette use by never-smoking adolescents was associated with approximately **4 times greater odds of future cigarette smoking.**

FLAVORS

- ✓ **88%** of youth who use ESDs **use flavored e-juice**¹
- ✓ **More rewarding** (work harder at task leading to flavored vs unflavored ESD reward)²
- ✓ **Increase ESD use** (users puff flavored ESDs twice as often as unflavored over same time period)²
- ✓ **Longer inhalations** (longer puff duration with sweet flavor vs nicotine flavor)³

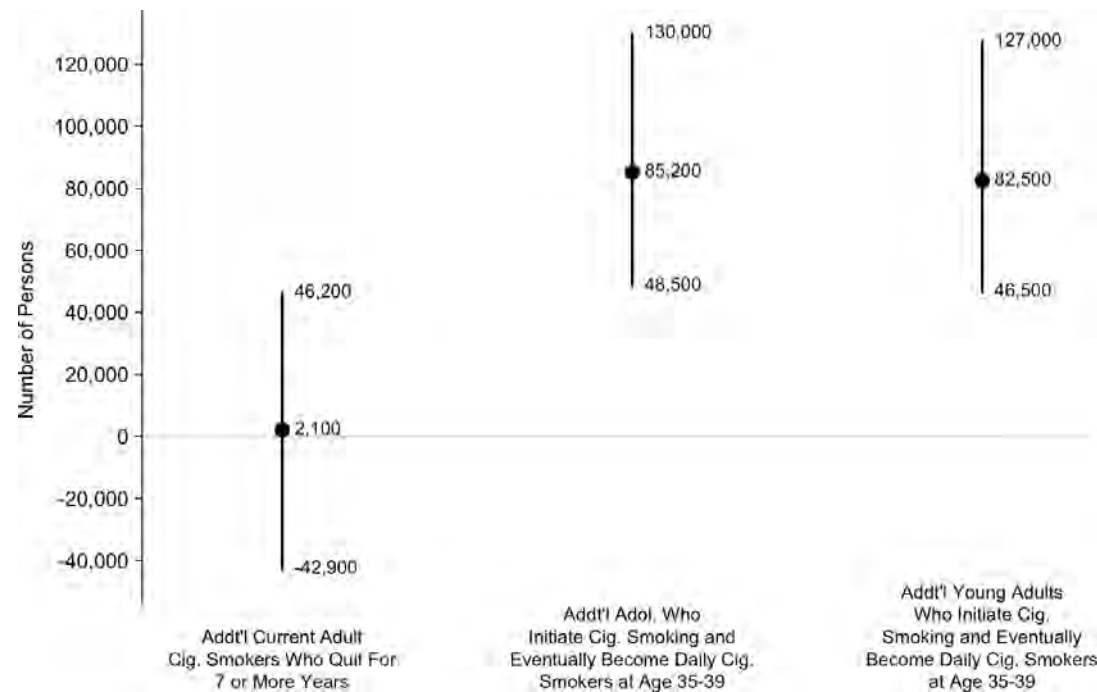
1. McMillen R, et al. Adolescent Use of Different E-cigarette Products. *Pediatrics*. 2018;142(4):e20180260.
2. Audrain-McGovern J, et al. The impact of flavoring on the rewarding and reinforcing value of e-cigarettes with nicotine among young adult smokers. *Drug Alcohol Depend*. 2016;166():263-267.
3. St. Helen G, et al. Impact of e-liquid flavors on e-cigarette vaping behavior. *Drug Alcohol Depend*. 2018;189:42-48.

Which Chemicals Are Found in E-Cig/Pod-Based Aerosol?

<ul style="list-style-type: none"> • Propylene glycol • Glycerin • Flavorings (many) • Nicotine • NNN • NNK • NAB • NAT • Ethylbenzene • Benzene • Xylene • Toluene • Acetaldehyde • Formaldehyde • Naphthalene • Styrene • Benzo(b)fluoranthene 	<ul style="list-style-type: none"> • Chlorobenzene • Crotonaldehyde • Propionaldehyde • Benzaldehyde • Valeric acid • Hexanal • Fluorine 	<ul style="list-style-type: none"> • Benzo(ghi)perylene • Acetone • Acrolein • Silver • Nickel • Tin • Sodium 	<ul style="list-style-type: none"> • Cadmium • Silicon • Lithium • Lead • Magnesium • Manganese • Potassium • Titanium • Zinc • Zirconium • Calcium • Iron • Sulfur • Vanadium • Cobalt • Rubidium
<p>All of these have been found in e-cigarette/pod-based aerosol</p>			
<ul style="list-style-type: none"> • Fluoranthene • Benz(a)anthracene • Chrysene • Retene • Benzo(a)pyrene • Indeno(1,2,3-cd)pyrene 	<ul style="list-style-type: none"> • Boron • Copper • Selenium • Arsenic • Nitrosamines • Polycyclic aromatic hydrocarbons 		

Compounds in orange are from FDA 2012, Harmful and Potentially Harmful Substances – Established List

E-cigarettes as a “cessation aid”?



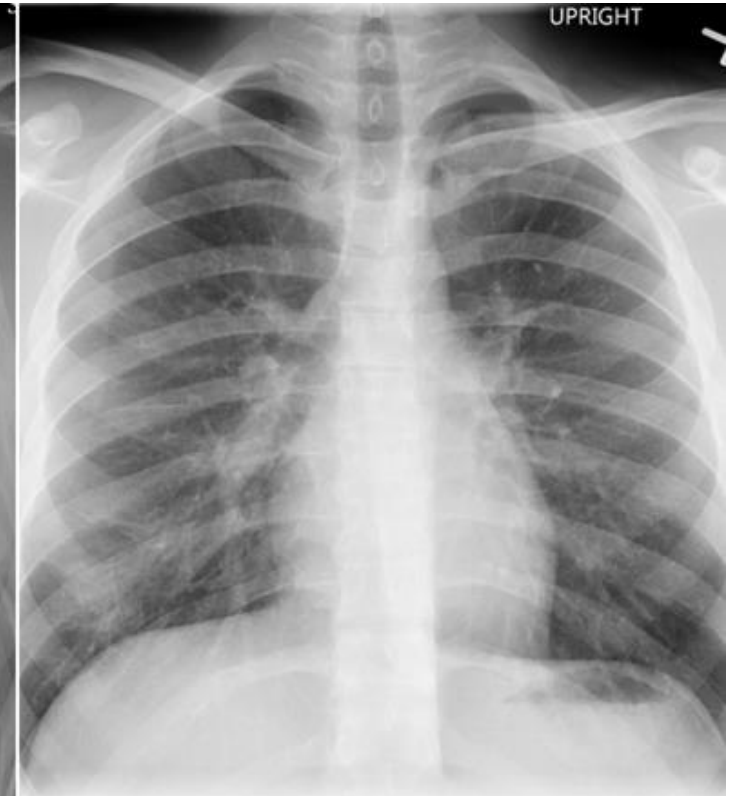
- Statistical risk model. Samir Soneji, et al. Dartmouth-Hitchcock Norris Cotton Cancer Center, Lebanon, N.H. Quantifying population-level health benefits and harms of e-cigarette use in the United States
- In a single year, 2,070 adult smokers would successfully quit using e-cigarettes
- But the model also estimated that e-cigarette use among non-smoking teens and young adults would lead to 168,000 new smokers.
- **So for every 1 adult that quits, 81 young people become future smokers**

E-cigarette, or vaping, product use associated lung injury (EVALI)

- 95% of patients initially experienced respiratory symptoms
 - Cough
 - Chest pain
 - Shortness of breath
- 77% had gastrointestinal symptoms
 - Abdominal pain
 - Nausea
 - Vomiting
 - Diarrhea
- 85% with constitutional symptoms
 - Fever
 - Chills
 - Weight loss

E-cigarette, or vaping, product use associated lung injury (EVALI)

- 47% of EVALI patients were admitted to the ICU
- 22% required intubation and mechanical ventilation.



17 year old Tryston Zohfeld admitted for 18 days to hospital in Fort Worth, Texas. 10 days in medically-induced coma. Initial x-ray similar to pneumonia.

L.A. County death linked to vaping

BY SOUMYA
KARLAMANGLA

Amid a major outbreak of severe lung illness linked to vaping, health officials announced Friday that five people across the country have died from the mysterious disease, including one in Los Angeles County.

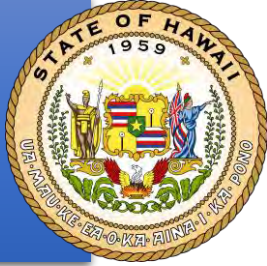
In recent weeks, federal health officials have been investigating severe symptoms, including chest pain, shortness of breath and vomiting, associated with e-cigarettes. They say they are



- Simah Herman started vaping at age 15 and got sick at age 17.
- She was admitted to the UCLA Medical Center. Her chest X-ray showed white hazy areas at the bottom of her lungs. Less than 48 hours later, chest X-rays showed that her lungs were filled with fluid and inflammation.
- Her lungs failed and she had to be put on a ventilator.
- She began an online anti-vaping campaign from her hospital bed, where she says she landed because of vaping.
- “Vaping is advertised as ‘a healthier alternative to smoking’ which is false. Whether it’s nicotine or weed, vaping can be fatal,” she wrote.

Hawaii's first case of vaping-related lung illness

September 2019



- From Big Island
- Required air transport to Kapiolani Medical Center for Women & Children
- Admitted to Pediatric Intensive Care Unit

State investigates first possible case of vaping-associated lung illness



THE PATIENT

- Under 18 years old
- Serious lung injury
- Reported earlier this week
- Hospitalized and receiving treatment

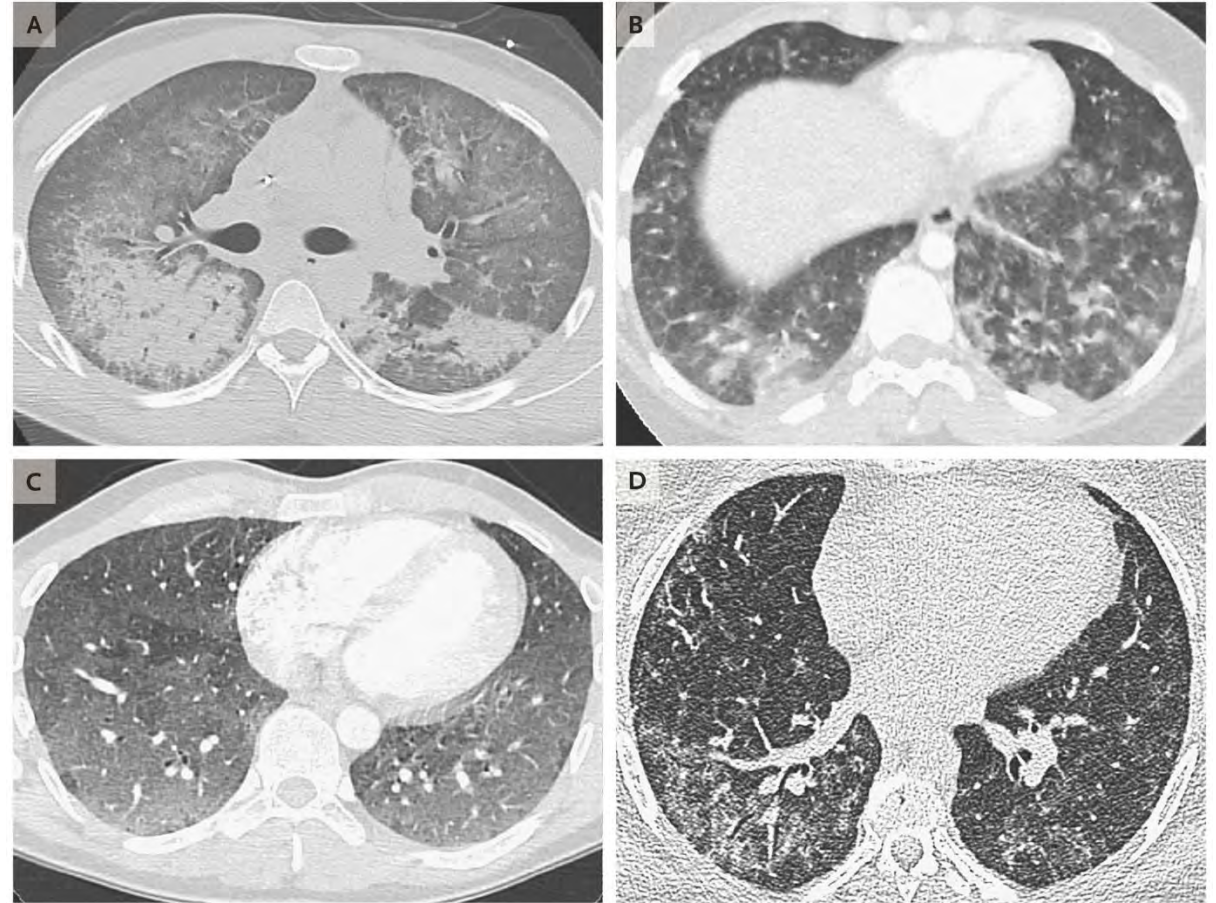
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by: Sara Mattison

Posted: Sep 10, 2019 / 02:39 PM HST / Updated: Sep 10, 2019 / 06:37 PM HST

Lung inflammation due to vaping

- A) 20 year old man, **diffuse alveolar damage**--dependent consolidation and diffuse ground-glass opacity, with some areas of bronchial dilatation typical of diffuse alveolar damage. The patient underwent intubation.
- B) 19 year old woman with **acute eosinophilic pneumonia** shows diffuse nodular areas of consolidation and ground-glass opacity, with mild septal thickening and a small right pleural effusion.
- C) 35 year old man with a pattern of **hypersensitivity pneumonitis** shows extensive centrilobular ground-glass attenuation nodules, especially in the anterior region, and more confluent ground-glass opacity in the dependent lungs, with lobules of mosaic attenuation.
- D) 49 year old woman with **giant-cell interstitial pneumonia** which was diagnosed on the basis of findings on surgical biopsy of the lung and was attributed to cobalt in her vape pen, shows fibrosis characterized by peripheral reticulation, ground-glass opacity, and mild traction bronchiectasis.



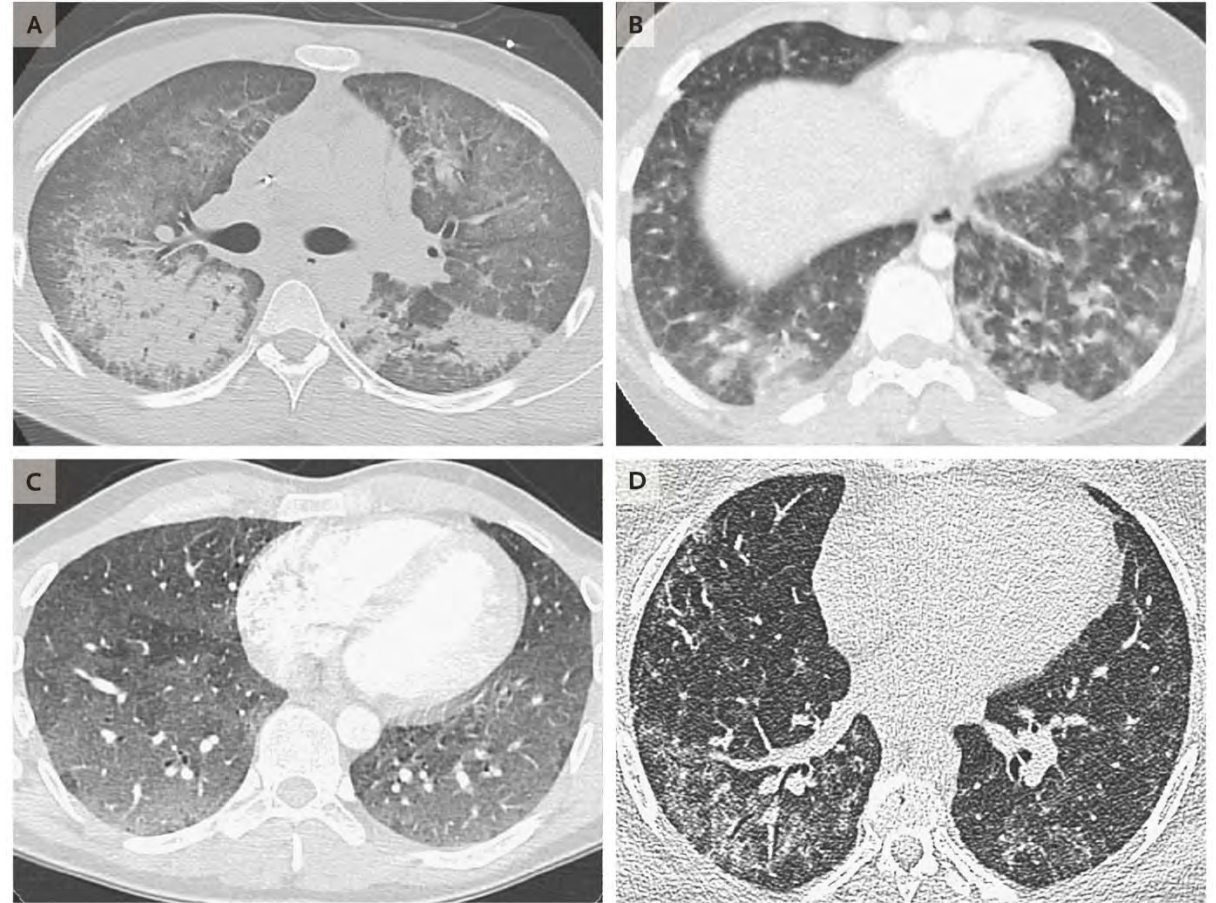
Lung inflammation due to vaping

A) Rapidly developing **acute lung injuries** (e.g., acute eosinophilic pneumonia and diffuse alveolar damage) are associated with **inhalational injuries**.

- **Example: Paint Fumes**

B) **Hypersensitivity pneumonitis** is an **immune response** to an environmental antigen.

- **Examples: Farmer's lung:** seen in farmers and cattle workers, this condition is caused by breathing mold that grows on hay, straw and grain.
Bird fancier's lung: caused by breathing particles from feathers or droppings of many species of birds.



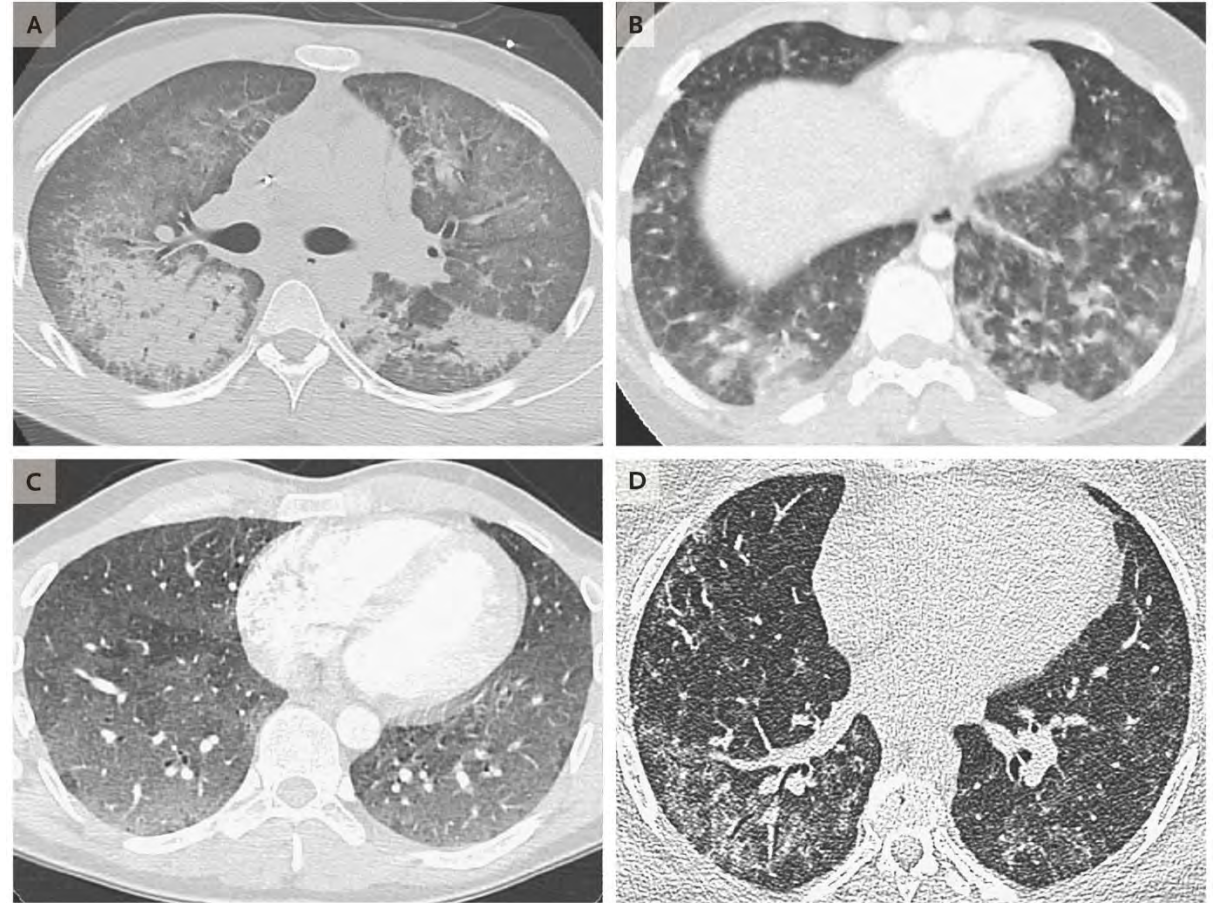
Lung inflammation due to vaping

C) Lipoid pneumonia is an inflammatory response to the presence of **lipids** within the alveolar space and typically results from **aspiration of hydrocarbons or oil-based products**, but it has now been seen with vaping

- **Example: Fire breather's pneumonia** from the inhalation of hydrocarbon fuel

D) The one case of giant-cell interstitial pneumonia (a rare fibrosing interstitial lung disease) that was correlated with **hard metals** in ENDS developed over a period of 6 months.

- **Example: Hard metal lung disease** seen in machinists from exposure to cobalt



Lung inflammation due to vaping

'A direct, toxic chemical injury': What vaping does to the lungs

Despite the recent surge in vaping-related illnesses, doctors suspect they've seen such cases in the past.



"It looks like the kind of injury that we normally see when a person is exposed to a spilled drum of toxic chemicals at their workplace," said Dr. Brandon Larsen, an author of the study and a surgical pathologist at the Mayo Clinic in Scottsdale, Arizona.

Larsen and colleagues examined lung biopsy samples from 17 patients with lung illnesses linked to vaping, a small portion of the 805 cases confirmed by the Centers for Disease Control and Prevention.

Other Adverse Health Effects

- Seizures
- Increased risks of cancers and precancerous changes in cells
- Exposure to chromium, lead, nickel, and other metals

HEALTH AND SCIENCE

FDA investigating 127 reports of seizures after vaping

PUBLISHED WED, AUG 7 2019 • 2:09 PM EDT | UPDATED THU, AUG 8 2019 • 3:37 PM EDT

Electronic-cigarette smoke induces lung adenocarcinoma and bladder urothelial hyperplasia in mice



Moon-shong Tang, Xue-Ru Wu, Hyun-Wook Lee, Yong Xia, Fang-Ming Deng, Andre L. Moreira, Lung-Chi Chen, William C. Huang, and Herbert Lepor

PNAS first published October 7, 2019 <https://doi.org/10.1073/pnas.1911321116>

Article | [Open Access](#) | Published: 27 September 2019

Effects of Model, Method of Collection, and Topography on Chemical Elements and Metals in the Aerosol of Tank-Style Electronic Cigarettes

Monique Williams, Jun Li & Prue Talbot

Causes

- Still being determined
- Concern for oil droplets in aerosol causing lung injury though not conclusively determined.
- Vitamin E, which is lipid soluble (oil-based) has been found in some cases.
- Cases include nicotine-only, THC-only, combination use—CDC advises **stopping all e-cigarette use** for all substances.
- There could be more than one cause. Inhalation of any substance can affect the lungs.

Cases Throughout the U.S.

July to October 2019

July 2019

JUUL



186,409 views | Jul 18, 2019, 07:00pm

Teen's Two-Pod A Day Juul Addiction Caused Massive Stroke, Lawsuit Says

Maxwell Berger, 22, developed an addiction to Juul products during the summer of 2015

By 2017, Berger was taking puffs of his Juul as often as every ten minutes, causing him to go through two cartridges every day

That July, Berger had a massive hemorrhagic stroke, which required three brain surgeries and more than 100 days in the hospital

It left him with "catastrophic and permanent injuries" such as left side paralysis, speech impairment and a 50% loss of vision from both eyes

July 2019



Teenagers Who Reported Vaping, Receive Treatment For Lung Damage At Milwaukee Hospital

Teens Had Symptoms Of Fatigue, Shortness Of Breath, Chest Pain, Cough, Weight Loss

By Shamane Mills

Published: Thursday, July 25, 2019, 12:05pm

Updated: Thursday, July 25, 2019, 2:30pm

Children's Hospital of Wisconsin reported eight cases of hospitalized teenagers with seriously damaged lungs to the Wisconsin Department of Health Services in July.

The state is currently investigating the possible causes of these illnesses, but all patients reported vaping in the weeks and months prior to being hospitalized.

While an exact cause is unknown, the number of patients in such a short time frame is concerning.

August 2019



Vaping habit nearly kills young man when he develops pneumonia

by Cynthia Gould | Thursday, August 1st 2019

20 year old Alex Mitchell used to vape daily

Purchased a brand new bottle of “peach menthol” e-juice

Developed “lipoid pneumonia” caused by inhaling fat particles

Progressed to acute respiratory distress syndrome and placed on life support

August 2019



What Utah doctors are saying about vaping

By Kim Bojórquez | @kimbojorquez | Aug 6, 2019, 6:30pm MDT



25 year old Aubree Butterfield started vaping when she was 22

Aubree presented to the hospital with pneumonia-like symptoms, nonstop vomiting, and she was coughing up blood

She was diagnosed with lipoid pneumonia, a potentially deadly condition now being linked to vaping

August 2019



CULTURE

FLORIDA TEENAGER WARNS AGAINST JUULING AFTER HIS LUNG COLLAPSED

BY **ISOBEL VAN HAGEN** ON 8/8/19 AT 10:39 AM EDT

18 year old Chance Ammirata started vaping at 16

By the time he was 18, he was going through a JUUL pod every two days

Presented to the emergency room struggling to breathe due to a collapsed lung

August 2019

Children's
MINNESOTA

Children's Minnesota confirms 4 severe lung injury cases linked to vaping

"The injuries have been severe and I'm hoping that this will help to get the word out."

Author: Kent Erdahl

Published: 9:30 PM CDT August 12, 2019

Updated: 10:11 PM CDT August 12, 2019

Children's Minnesota is confirming four cases of severe lung injury linked to vaping by teenagers, marking the first time cases have been identified in Minnesota.

The patients ranged from 16 to 18 years old, some reported vaping for months, others for years.

Symptoms are cough, fever, and shortness of breath. The patients have stopped vaping, gone home with typical treatment for pneumonia or bronchitis and continued to get worse.

August 2019



Local officials blame spike in 'wet lung' syndrome on vaping. Here's what we know

James Ward, Visalia Times-Delta | Published 8:29 a.m. PT Aug. 15, 2019 | Updated 3:09 p.m. PT Aug. 15, 2019

In recent months, health officials have reported a spike of people in Kings, Fresno, and Tulare counties being admitted to hospitals with Acute Respiratory Distress Syndrome (ARDS) or wet lung.

Wet lung is a severe pulmonary condition that produces flu-like symptoms and can rapidly escalate, health officials say.

Symptoms may include rapid breathing, nausea, a low blood-oxygen level, low blood pressure, confusion, and extreme tiredness.

August 2019



Multiple young adults treated at Vanderbilt for vaping-related illnesses, injuries

Posted: 3:37 PM, Aug 21, 2019 Updated: 5:19 PM, Aug 21, 2019

By: Rebekah Pewitt, Kelsey Gibbs

-in the last six months, Vandy doctors have seen four cases of e-cigarette injuries

-have seen patients for shortness of breath, severe pneumonia, lung collapse, coughing up blood and complete respiratory failure, often placing them in the Pediatric Intensive Care Unit. Some patients have recovered while others will have irreversible lung disease

August 2019



First Death Tied to Lung Injury From Vaping Reported in Illinois



By Dennis Thompson

HealthDay Reporter

FRIDAY, Aug. 23, 2019 (HealthDay News) -- An Illinois resident who was

They did not provide details about the patient's identity, saying only that the person was an adult who had vaped recently and then succumbed to a severe respiratory illness.

September 2019



Teen says using unregulated vaping products almost killed him

by Rachel Prichard | Wednesday, September 4th 2019

Parents: Our Daughter Nearly Died From Vaping

By Dana Kozlov September 5, 2019 at 11:24 pm Filed Under: Adam Hergenreder, Chicago, Chicago News, Dana Kozlov, Piper Johnson, Vaping



Vaping nearly kills Delaware County teen, doctors say

Amy Cherry Published Sep 4, 2019 at 5:00 pm | Updated Sep 11, 2019 at 3:36 pm

September 2019



A 6th person has died from a vaping-related lung illness, this time in Kansas

[Doug Stanglin](#), USA TODAY | Published 8:26 a.m. ET Sept. 11, 2019 | Updated 5:54 p.m. ET Sept. 17, 2019

Five previous vaping-related deaths were confirmed in California, Illinois, Indiana, Minnesota and Oregon

September 2019



GOOD SAMARITAN
MEDICAL CENTER



CHEST

Postgraduate Education Corner
PULMONARY AND CRITICAL CARE PEARLS

An Unexpected Consequence of Electronic Cigarette Use

Lindsay McCauley, DO, Catherine Markin, MD, FCCP, and Danielle Hosmer, MD

CHEST 2012; 141(4):1110-1113

A 42-year-old woman was admitted to the hospital with a 7-month history of dyspnea, productive cough, and subjective fevers. She had been seen multiple times in the ED with similar complaints and had received several courses of antibiotics.

The patient had recently started using electronic cigarettes (e-cigarettes), about 7 months prior, which coincided with the onset of her respiratory symptoms. Her past medical history also was significant for asthma, reported rheumatoid arthritis, fibromyalgia, schizophrenia, and hypertension. Her medications included amlodipine, albuterol metered dose inhaler, lovastatin, lisinopril, multiple vitamins, cyclobenzaprine, citalopram, and multiple psychiatric medications.

The patient reported a recent exposure to fumigation chemicals, as the result of a bedbug infestation of her apartment building 2 weeks prior to her hospitalization. She had no pets. There was no other history of significant exposures, illicit drug use, or recent travel. She denied any dysphagia or aspiration.

Physical Examination

On presentation, her vital signs were notable for mild tachycardia and a pulse oximetric saturation of 94% while breathing room air. Her physical examination was normal except for bilateral rales.

Manuscript received May 27, 2011; revision accepted August 5, 2011.

Affiliations: From the Department of Internal Medicine (Dr. McCauley), the Department of Pulmonary Medicine (Dr. Markin and Hosmer), and the Department of Critical Care Medicine (Dr. Markin), Legacy Good Samaritan Medical Center, Portland, OR.

Correspondence to: Danielle Hosmer, MD, Department of Pulmonary Medicine, Legacy Good Samaritan Medical Center, 3222 NW Lovejoy St, Ste 411, Portland, OR 97210; e-mail: dhosmer@lhc.org

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DOI: 10.1378/chest.11-1334

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Laboratory Tests and Imaging Findings

Laboratory findings showed a WBC count of 18.0×10^9 with a normal differential and hemoglobin level of 11.2 g/dL. The chemistry panel and brain natriuretic peptide levels were normal. Chest radiographic imaging showed new multifocal bilateral opacities. CT images (Fig 1) revealed extensive bilateral upper- and lower-lobe patchy ground glass pulmonary opacities in a "crazy paving" pattern. Results of an HIV test were negative. Results of a nasal *Pertussis* polymerase chain reaction swab were negative. Results of urine *Legionella* antigen and serum *Mycoplasma* of urine IgG and IgM tests were negative. Results of a hypersensitivity pneumonitis panel, extracted nuclear antigen panel, and tests for antinuclear antibody,

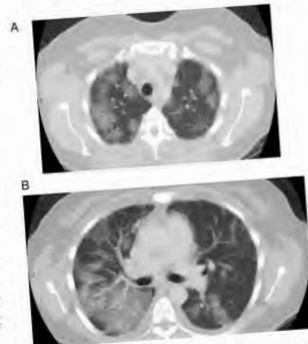


FIGURE 1. Representative CT images show the "crazy paving" pattern of patchy ground glass superimposed on interlobular septal thickening. A, Bilateral upper lobes. B, Bilateral lower lobes.

Postgraduate Education Corner

Dr. Cathy Markin said she had another case in 2016.

"I think part of it is that more people are vaping. More physicians are recognizing that vaping could be playing a role in unexplained respiratory failure. But I also think that there's something different going on out there. We wouldn't see this cluster of cases unless there was something that was changing out there," Markin said.

September 2019



Boston
Children's
Hospital

Why the vaping lung illness crisis is exploding now, according to Boston doctors

By Naomi Martin Globe Staff, September 17, 2019, 8:32 p.m.



Local doctors believe the vaping-related lung injuries have been going on much longer and affected far more people than officially reported. They say there are a host of reasons for the current crisis: **toxic chemicals in the supply chain of vape products; clinicians previously only asked patients about cigarettes, not vaping; and more people are vaping now.**

October 2019



17-Year-Old May Be First Teen Vaping Death in U.S.

A Bronx boy has died, becoming what is believed to be the youngest of the 23 people to die nationwide from the mysterious vaping-related lung illness.

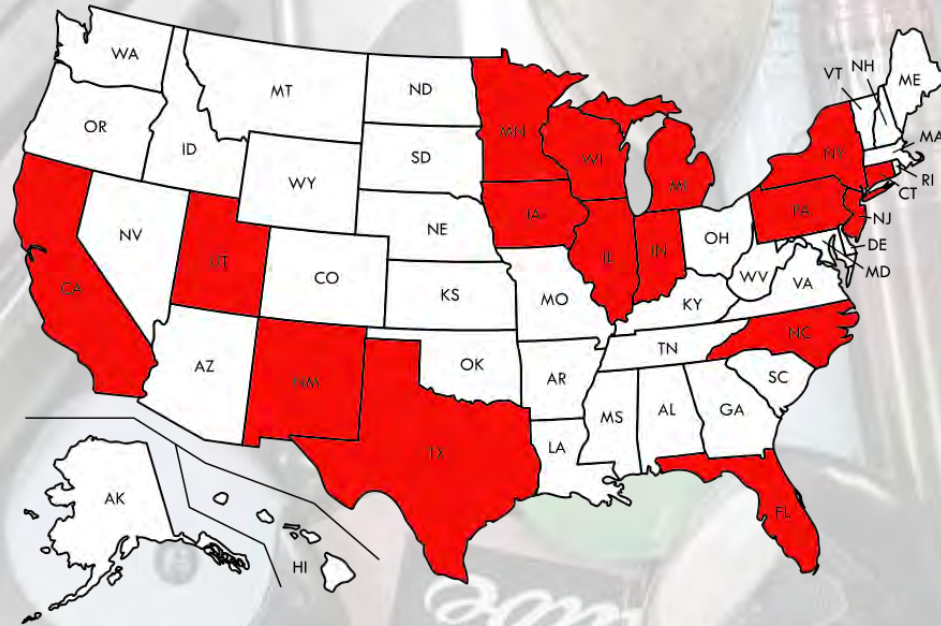
As of October 8, the New York State Department of Health had received 110 reports from doctors about severe pulmonary illness among patients ages 14 to 69 who had used at least one vape product before becoming sick.

The teenager died on October 4 after being hospitalized twice in September with a vaping-related illness, becoming the state's first fatality from the mysterious lung disease, according to state health officials.

August 2019

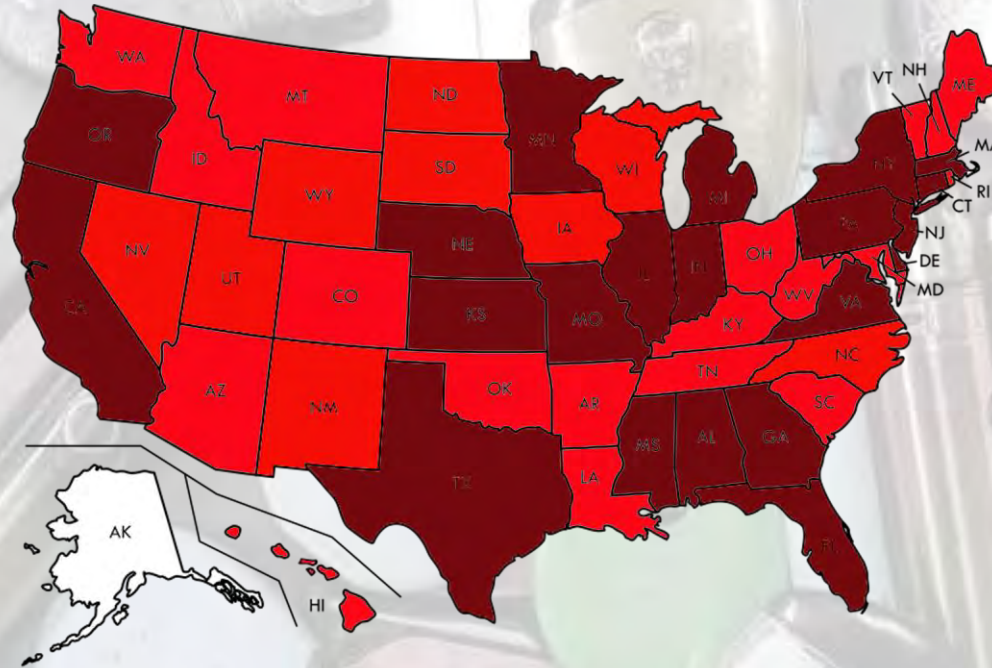


*Vaping Sicknesses Rising: 153
Cases Reported in 16 States*



**-many patients have reported using e-cigarettes containing
cannabinoid products such as THC or CBD**

October 2019



INVESTIGATING OVER 1,299 CASES OF SEVERE PULMONARY DISEASE LINKED TO VAPING IN 49 STATES

Current numbers affected

- As of October 15, 2019, **1299 lung injury cases** associated with the use of e-cigarette, or vaping, products have been reported to CDC from 49 states, the District of Columbia, and 1 U.S. territory.
- **26 deaths** have been confirmed in 21 states.
- All patients have reported a history of using e-cigarette, or vaping, products.

Current Knowledge – October 8, 2019



Cases 1043 Patients

Age groups (years)

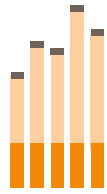


Sex



Summary

- **Nicotine + acid** = nicotine salts. Nicotine can enter the body more quickly and at higher amounts, leading to extreme addiction.
- Chemicals used for **flavors** and e-liquid solvent such as **propylene glycol** are also **harmful** when inhaled as aerosol.
- **Not a cessation device** and never FDA approved as such. Appealing to youth. Many more young people start vaping than adults who quit.
- **Severe harm—lung inflammation** requiring intubation, ICU admission, potentially death.



tobacconomics

Economic Research Informing Tobacco Control Policy

The Truth About Tobacco Economics

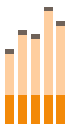
Frank J. Chaloupka, University of Illinois at Chicago

Informational Briefing – Seeking Solutions to End the Youth Vaping Epidemic

Honolulu, Hawaii, October 17, 2019

Overview

- Impact of taxes/prices on tobacco use
- Economic counterarguments – Myths & Facts
- Taxation of vaping products




TOBACCO CONTROL

DEVELOPMENT IN PRACTICE

Curbing the Epidemic

Governments and the Economics of Tobacco Control




A WORLD BANK PUBLICATION

The International Tobacco Control Policy Evaluation Project

Tobacco Price and Taxation

ITC Cross-Country Comparison Report



MARCH 2012

UNIVERSITY OF WATERLOO

itc International Tobacco Control Policy Evaluation Project

International Agency for Research on Cancer
World Health Organization


IARC HANDBOOKS OF CANCER PREVENTION
Tobacco Control

Volume 14

Effectiveness of Tax and Price Policies for Tobacco Control

2011

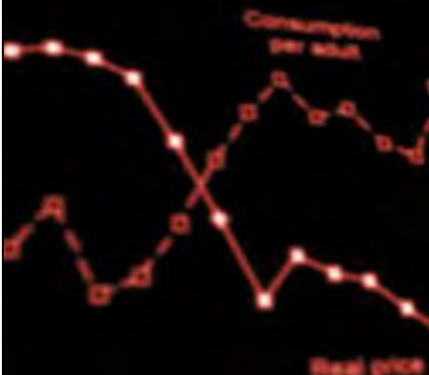
The Economics of Tobacco Control: Evidence from the International Tobacco Control (ITC) Policy Evaluation Project



Guest Editor: John Taurus

itc International Tobacco Control Policy Evaluation Project

tobaccocontrol.bmj.com **BMJ**



Tobacco control in developing countries

editors | Prabhat Jha | Frank Chaloupka

WHO Technical Manual on Tobacco Tax Administration



World Health Organization

World Health Organization

WHO REPORT ON THE GLOBAL TOBACCO EPIDEMIC, 2015
Raising taxes on tobacco

fresh and alive
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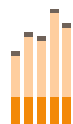
NCI TOBACCO CONTROL MONOGRAPH SERIES

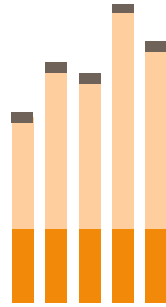
The Economics of Tobacco and Tobacco Control

IN COLLABORATION WITH WORLD HEALTH ORGANIZATION

Executive Summary

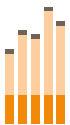
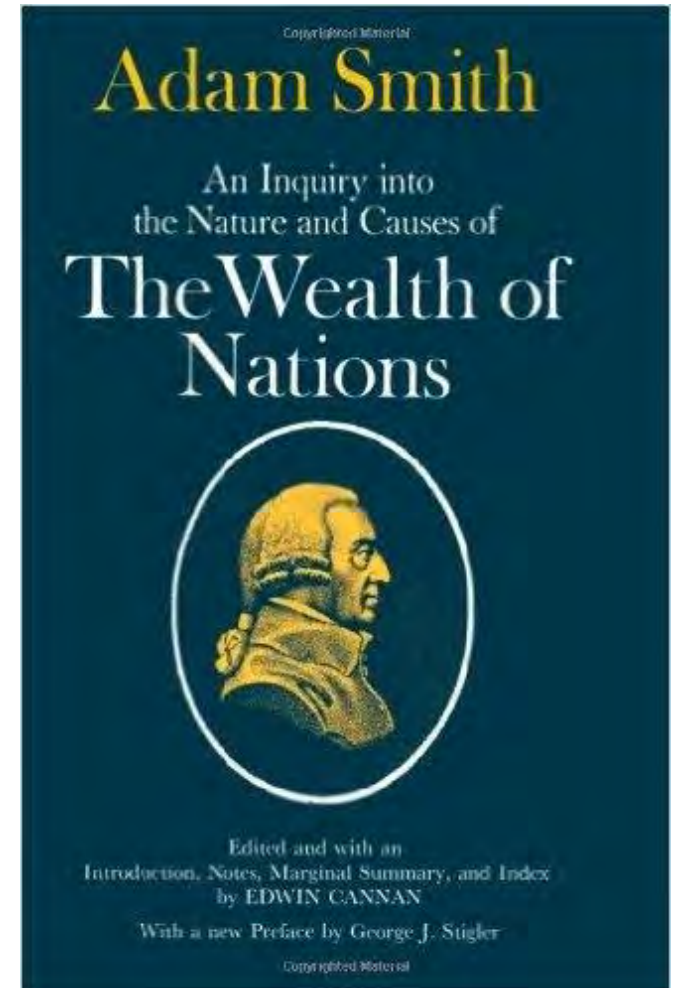
U.S. Department of Health & Human Services | National Institutes of Health



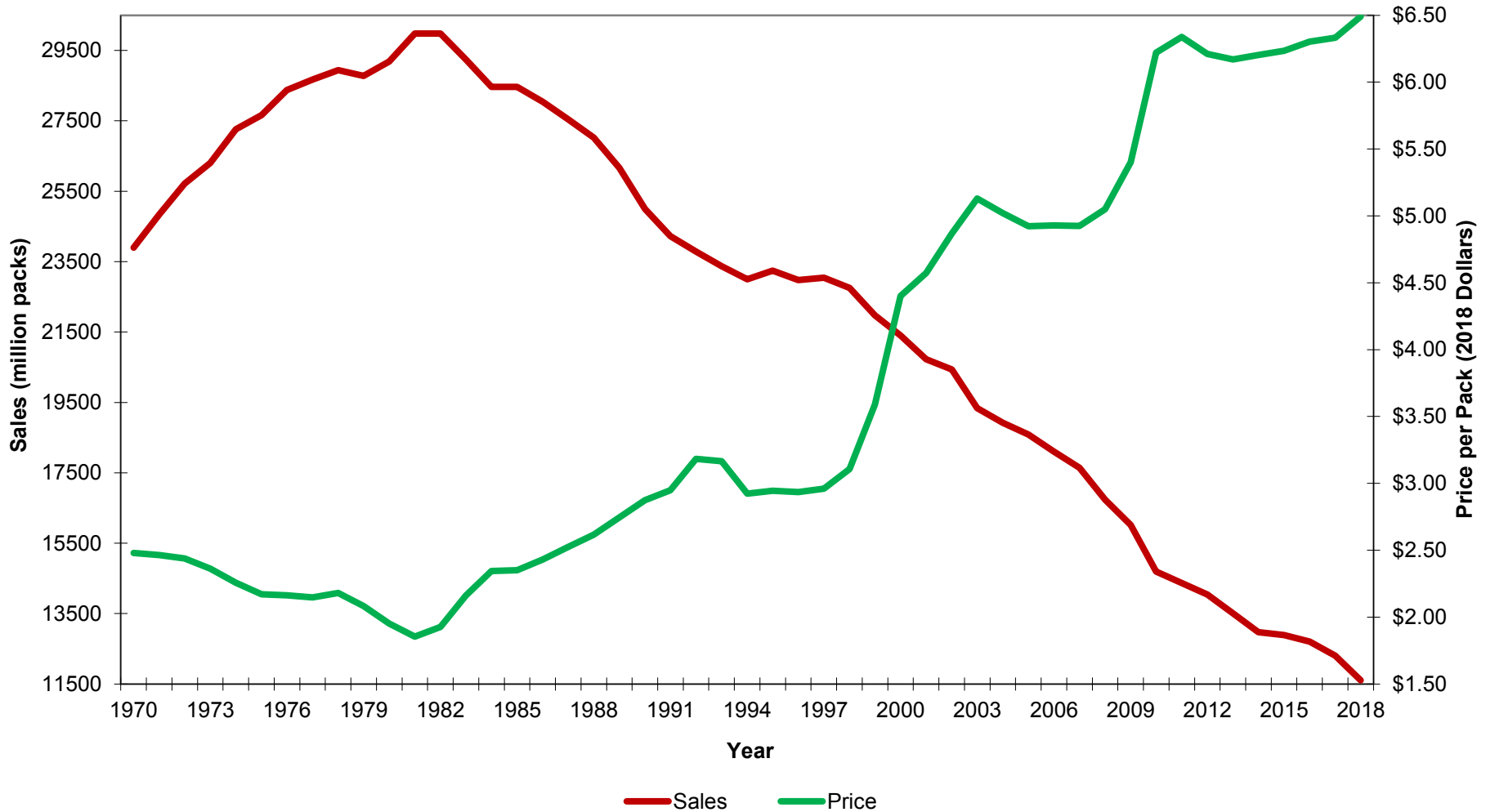


Impact of Tax and Price on Tobacco Use

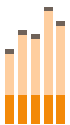
"Sugar, rum, and tobacco, are commodities which are no where necessaries of life, which are become objects of almost universal consumption, and which are therefore **extremely proper subjects of taxation.**



Cigarette Prices and Cigarette Sales United States, 1970-2018

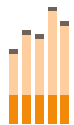
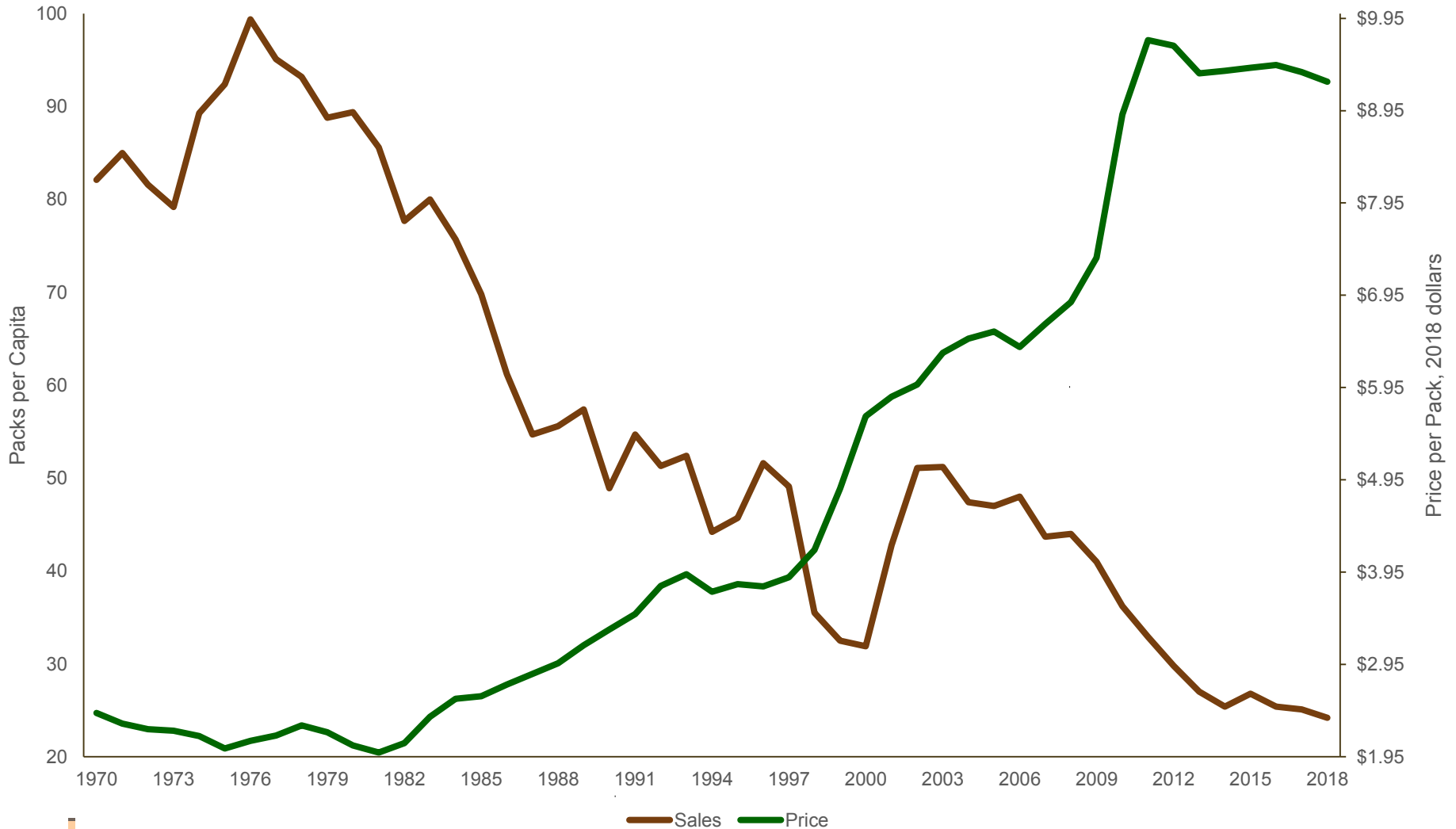


Source: *Tax Burden on Tobacco*, 2019, and author's calculations



Cigarette Price & Per Capita Cigarette Sales

Hawaii, FY1970-FY2018, Inflation Adjusted



Source: *Tax Burden on Tobacco*, 2019, and author's calculations

www.tobacconomics.org |

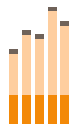


[@tobacconomics](https://twitter.com/tobacconomics)

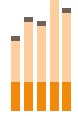
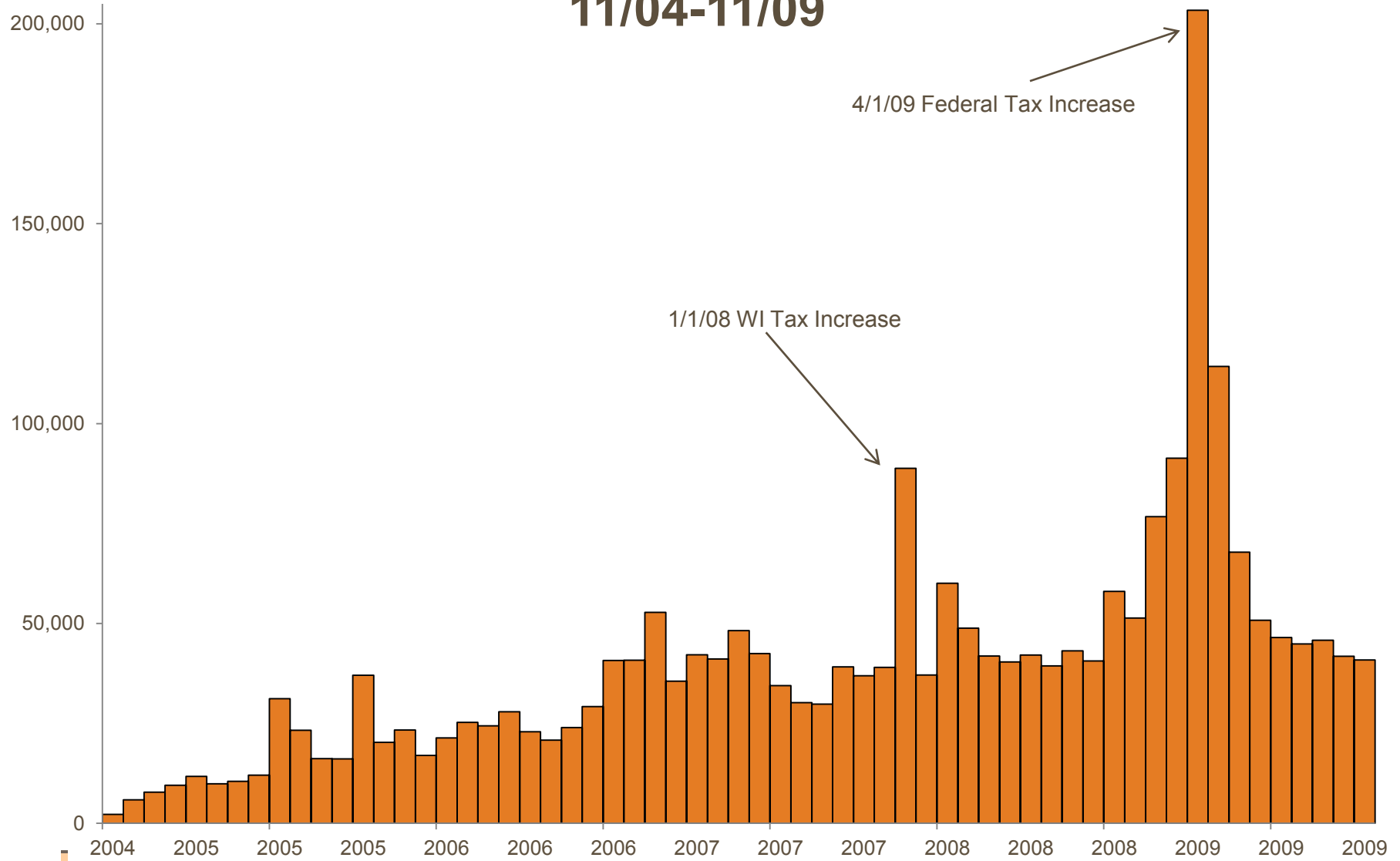
Cigarette Prices and Adult Smoking Prevalence, United States, 1970-2018



Source: NHIS, *Tax Burden on Tobacco*, 2019, and author's calculations
 Note: some early years for prevalence are interpolated assuming linear trend

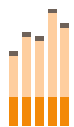
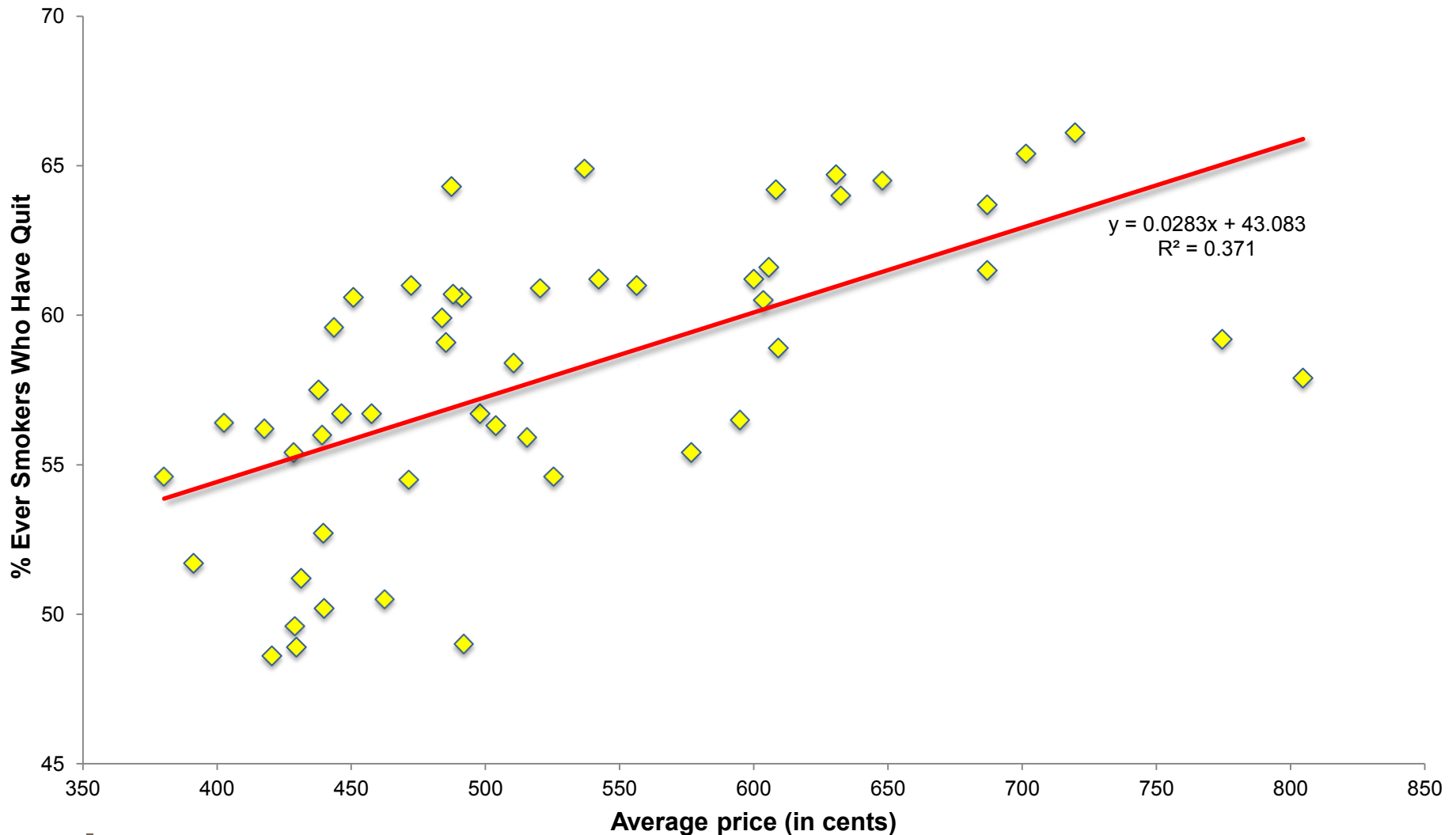


Monthly Quit Line Calls, United States 11/04-11/09



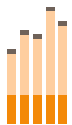
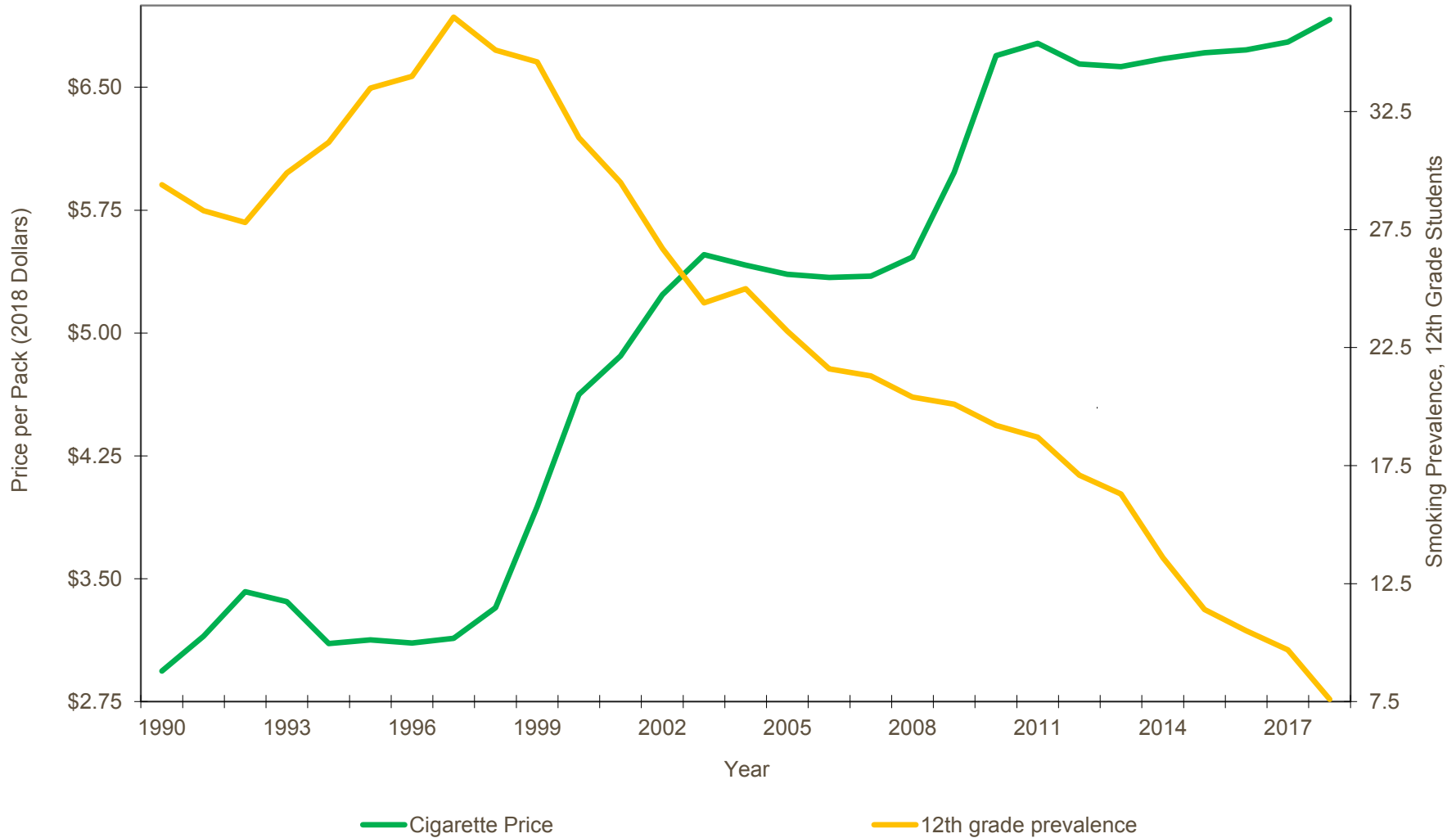
Cigarette Prices and Cessation

US States & DC, 2009



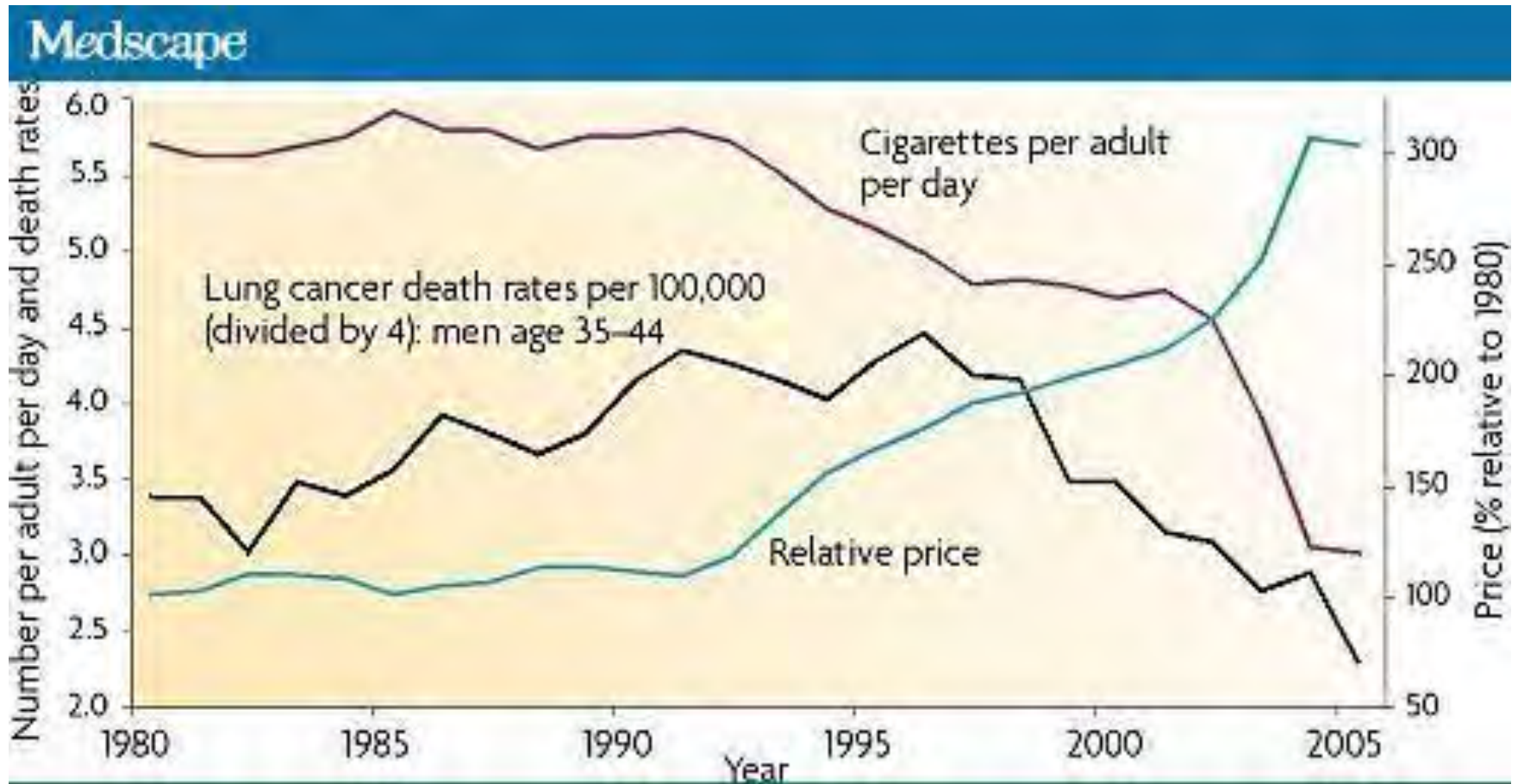
Source: BRFSS, *Tax Burden on Tobacco*, 2010, and author's calculations

Cigarette Price and Youth Smoking Prevalence High School Seniors, United States, 1990-2018

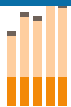


Source: MTF, *Tax Burden on Tobacco*, 2019, and author's calculations

Taxes, Prices and Health: US, 1980-2005

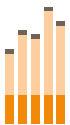


Source: Nat Rev Cancer © 2009 Nature Publishing Group

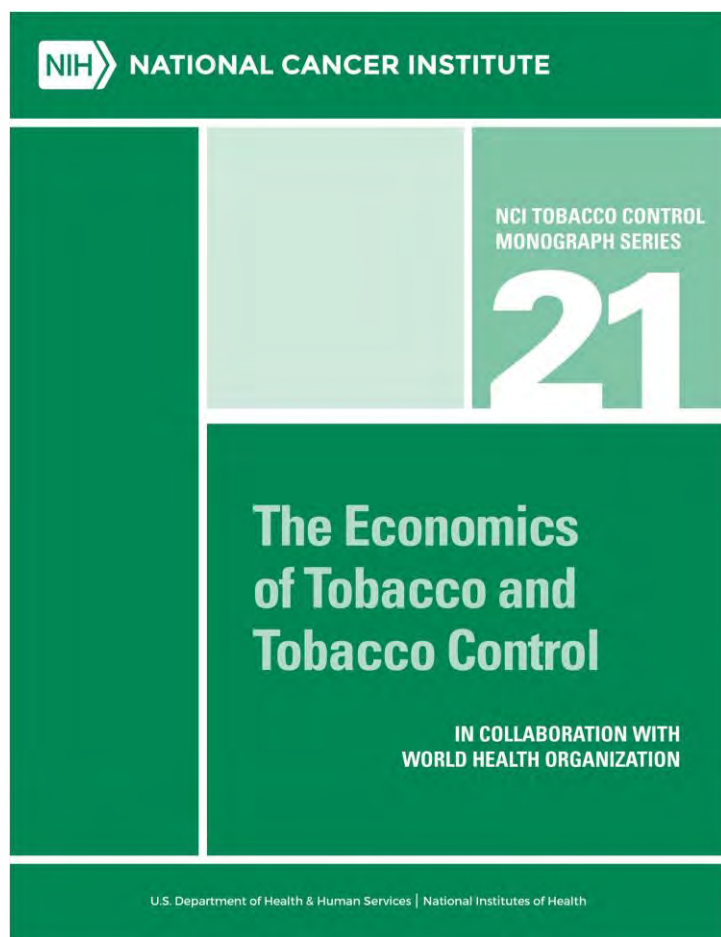


Prices and Tobacco Use

- Similar evidence for variety of other tobacco products
 - Generally see evidence of substitution
 - Greater substitution among more similar products

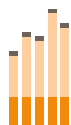


Effectiveness of Tobacco Taxes

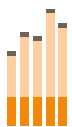
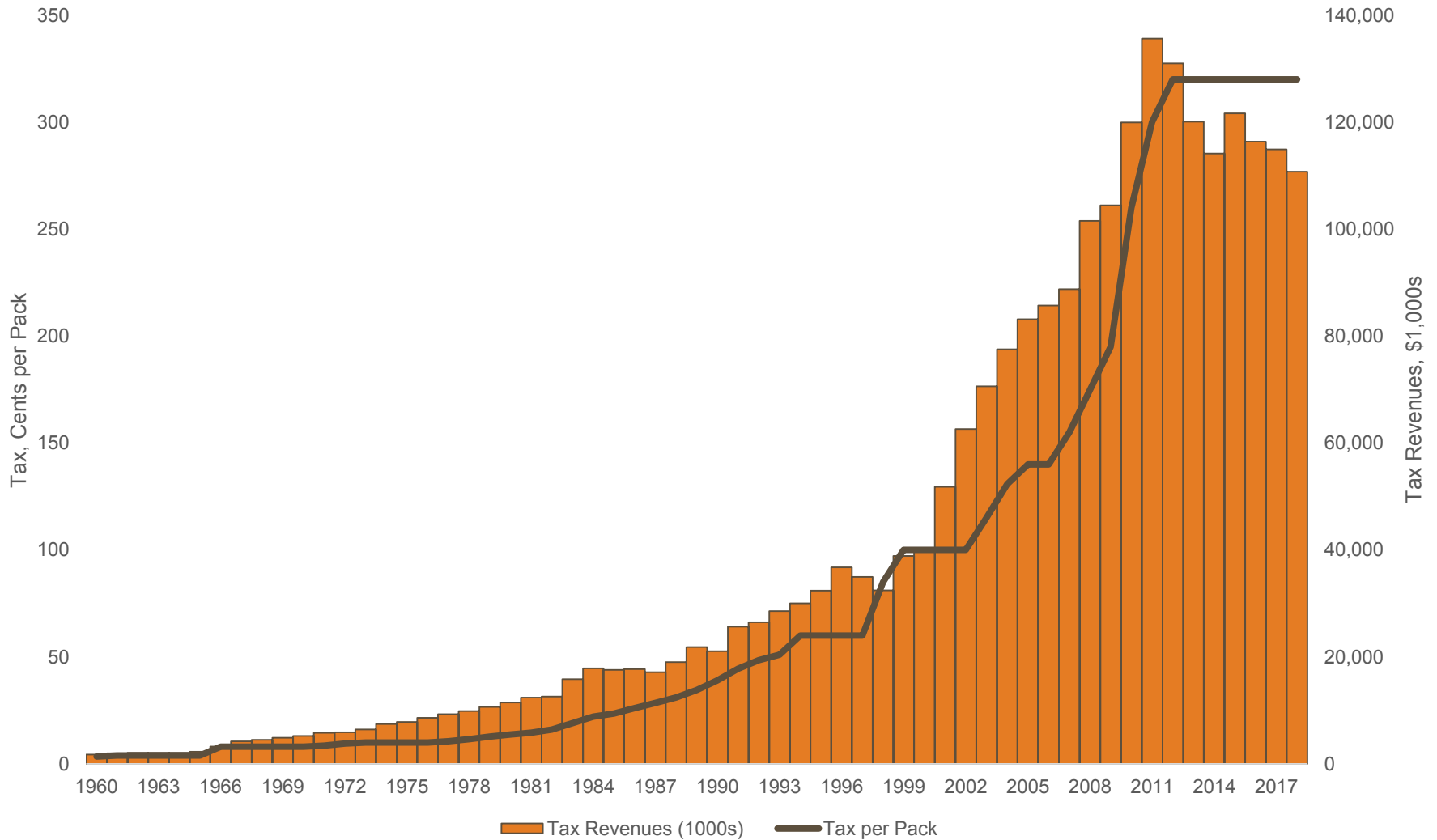


Chapter 4, Conclusion 1:

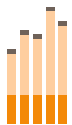
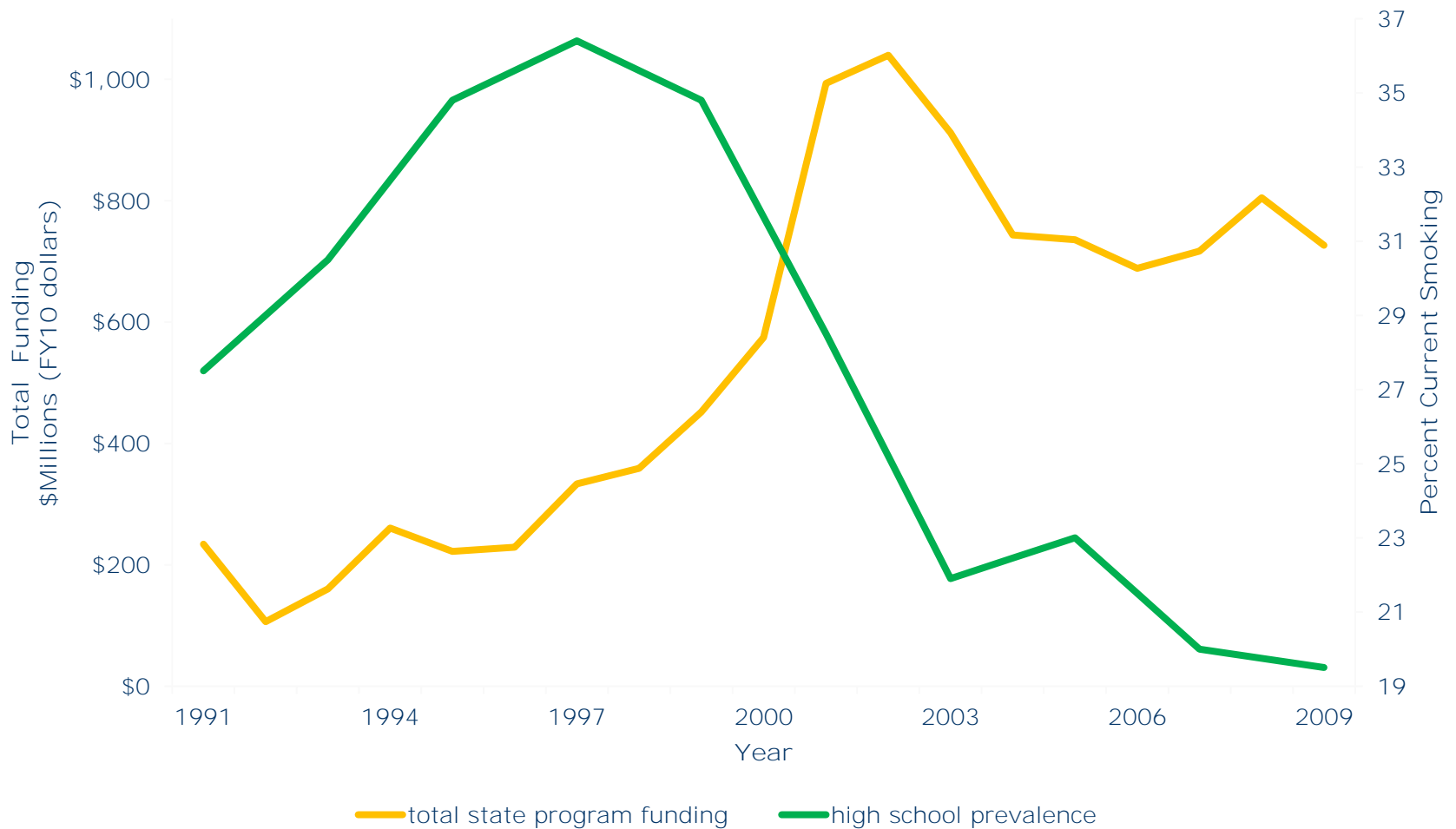
A substantial body of research, which has accumulated over many decades and from many countries, shows that **significantly increasing the excise tax and price of tobacco products is the single most consistently effective tool for reducing tobacco use.**



Cigarette Tax Rate and Tax Revenues Hawaii, FY1960-FY2018



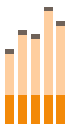
State Tobacco Control Program Funding and Youth Smoking Prevalence, United States, 1991-2009

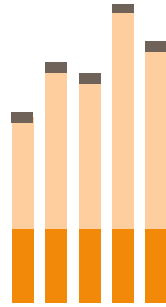


Source: ImpacTeen Project, UIC; YRBS

Potential Impact

- \$1.00 Increase in cigarette excise tax in Hawaii would:
 - Raise \$12.9 million in *new* tax revenue
 - Prevent 2,900 kids from taking up smoking
 - Encourage 4,400 adult smokers to quit
 - Prevent 1,900 premature deaths from smoking
 - Reduce smoking-complicated pregnancies and births by 300 in first 5 years
 - Save \$2.0 million in Medicaid spending in first 5 years

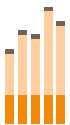




Economic Impact of Tobacco Control: Myths & Facts

Common Oppositional Arguments

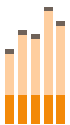
- Tobacco industry and its allies use several common arguments in opposition to tax increases and other effective tobacco control policies
 - Will lead to extensive tax avoidance and tax evasion
 - Will harm poor and working-class consumers
 - Will lead to massive job losses



Tax Avoidance & Evasion

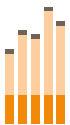
April 1, 2008 – New York Sun

- A pack of premium cigarettes in New York City now costs \$7 or \$8; prices would rise to above \$9. Opponents of the tax increase argue that **higher prices would drive smokers to seek ways to evade the law and purchase cheaper cigarettes from smugglers or in neighboring states, blunting potential revenue gains for the state. "It's a black market gold mine,"** a senior fellow at the Manhattan Institute, E.J. McMahon, said of the proposed tax.

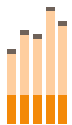
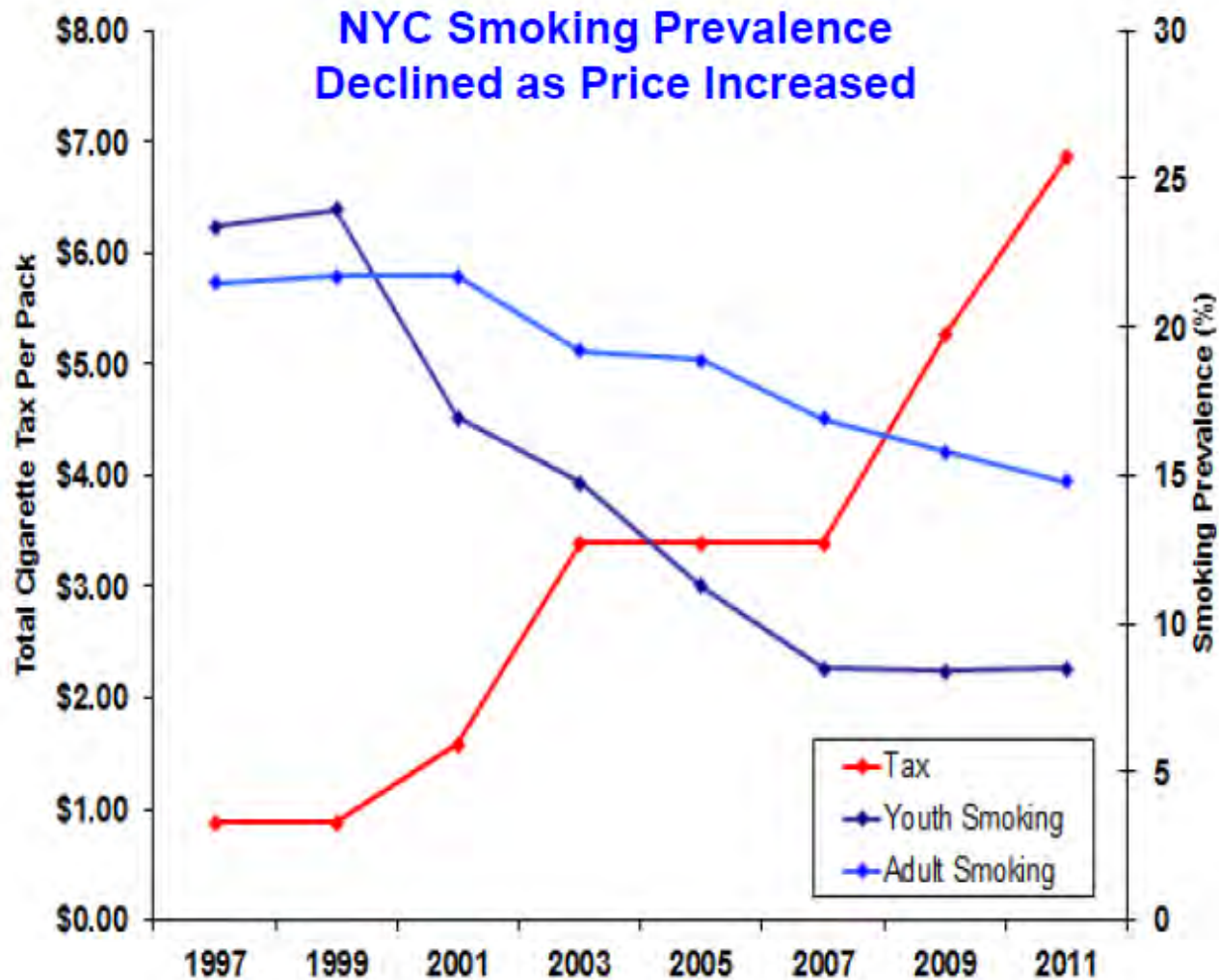


Tobacco Taxes & Illicit Trade

- Tobacco use falls and tax revenues increase following tax increases even in the presence of illicit tobacco trade



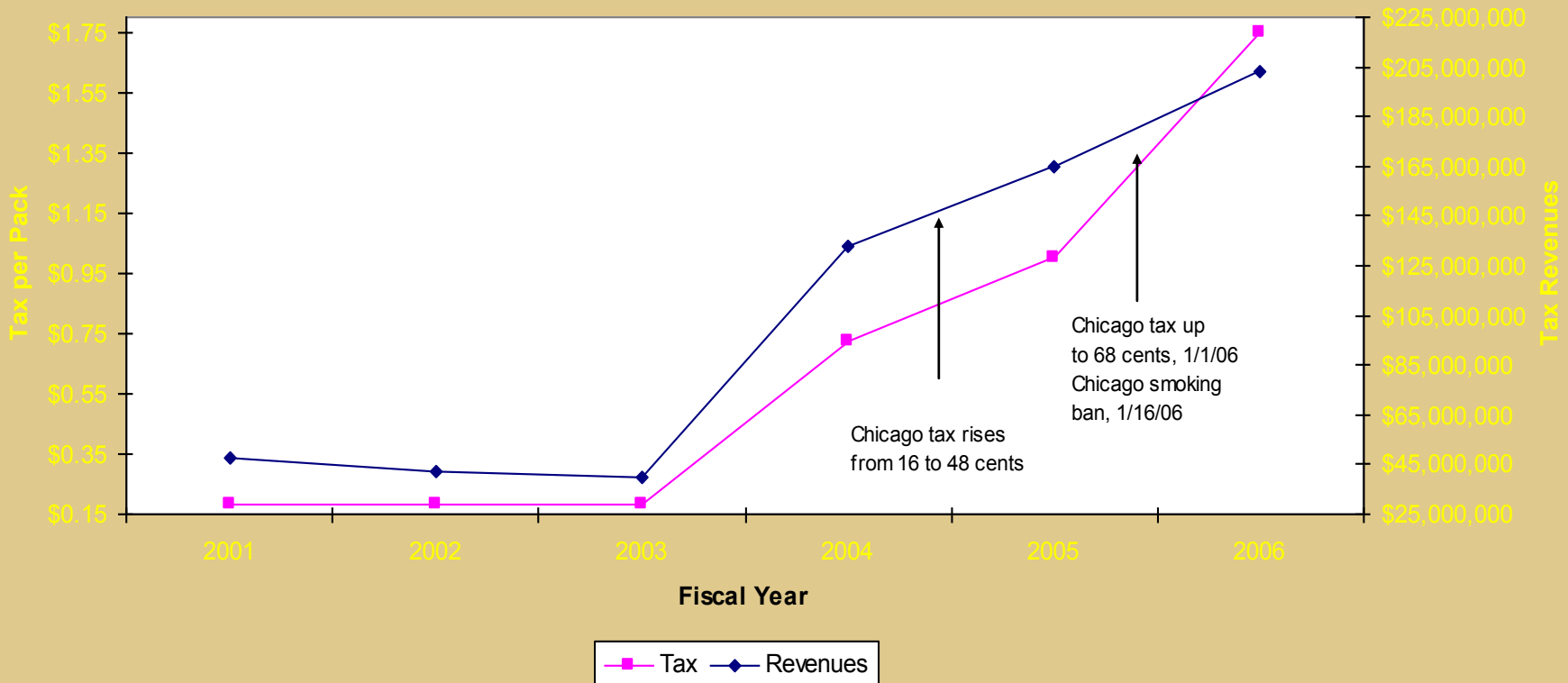
Tax Avoidance & Evasion Do NOT Eliminate Health Impact of Higher Taxes



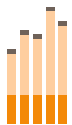
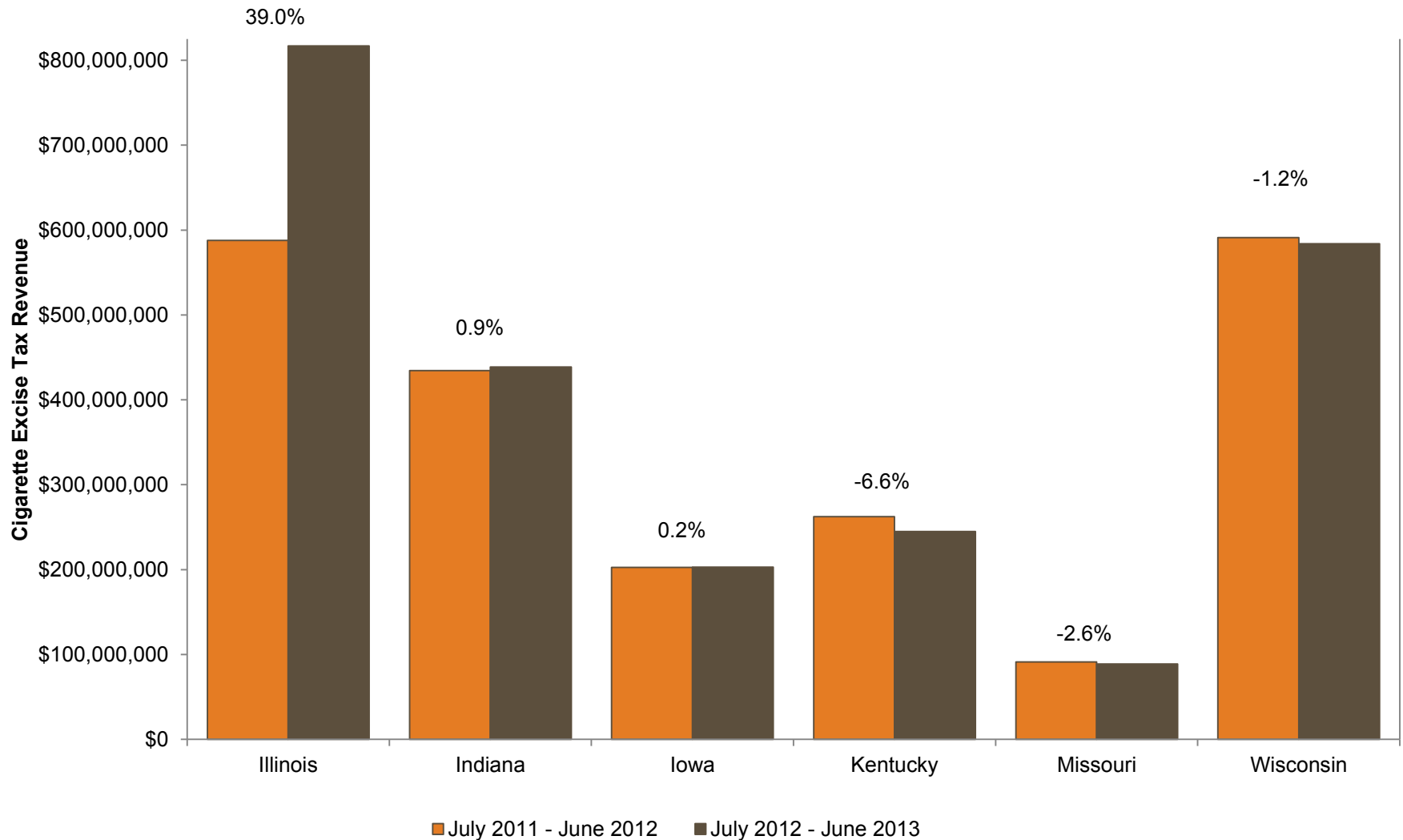
Tax Avoidance & Evasion

Do NOT Eliminate Revenue Impact of Higher Taxes

Cook County Cigarette Tax and Tax Revenues - FY01-FY06

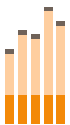


Cigarette Tax Revenues, Illinois and Neighboring States July 2011 - June 2012



Tobacco Taxes & Illicit Trade

- Governments can control illicit tobacco trade if they make it a priority and take appropriate steps



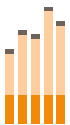
California's Encrypted Cigarette Tax Stamps

2005-2010 →

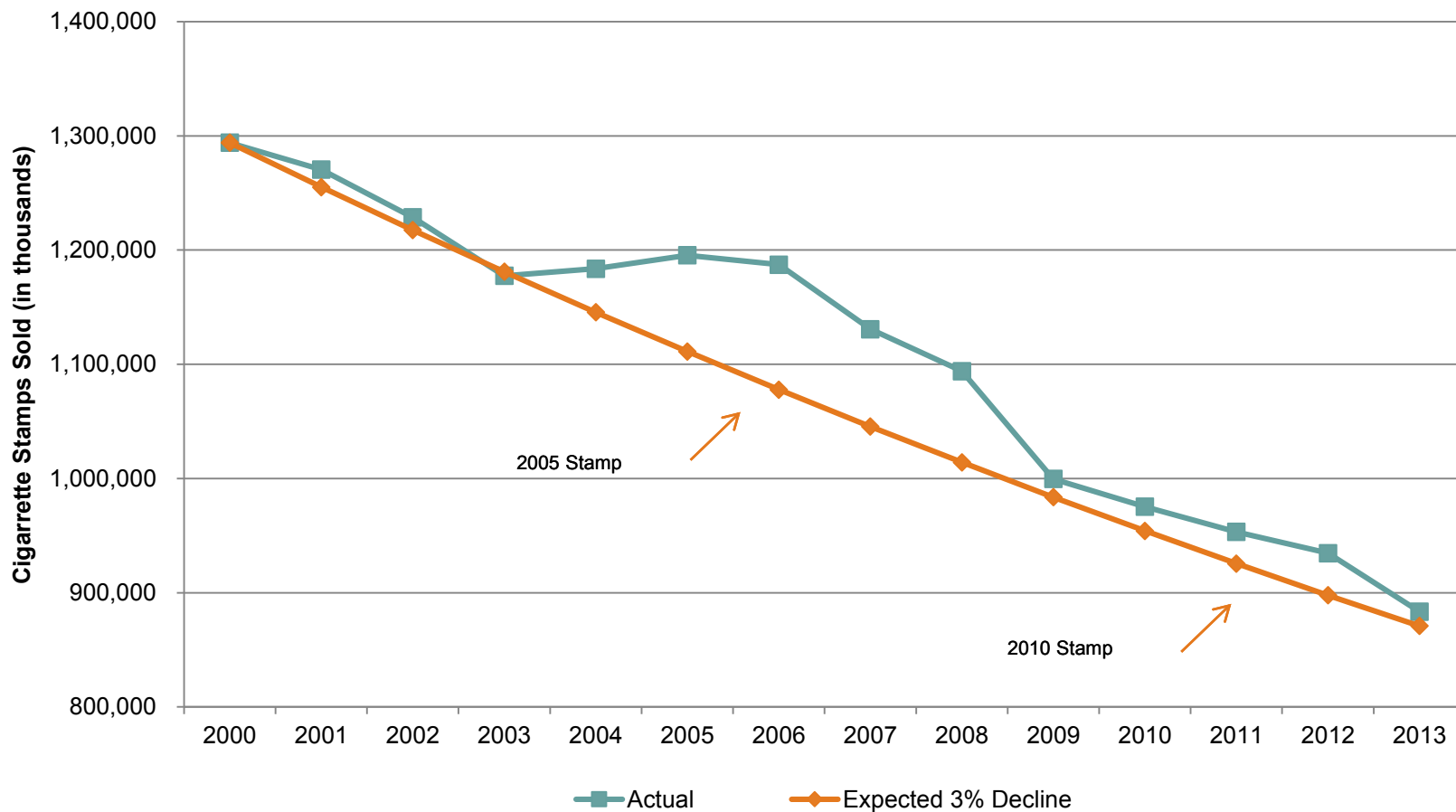


2011-present ↘

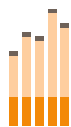
Stamp Front View (ink appears green)	Stamp Angled View (ink appears blue)



Cigarette Tax Stamps Sold – projected and actual, California, 2000 - 2013



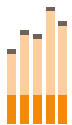
Source: CDC/Chaloupka et al., 2015



Impact on the Poor

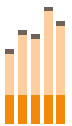
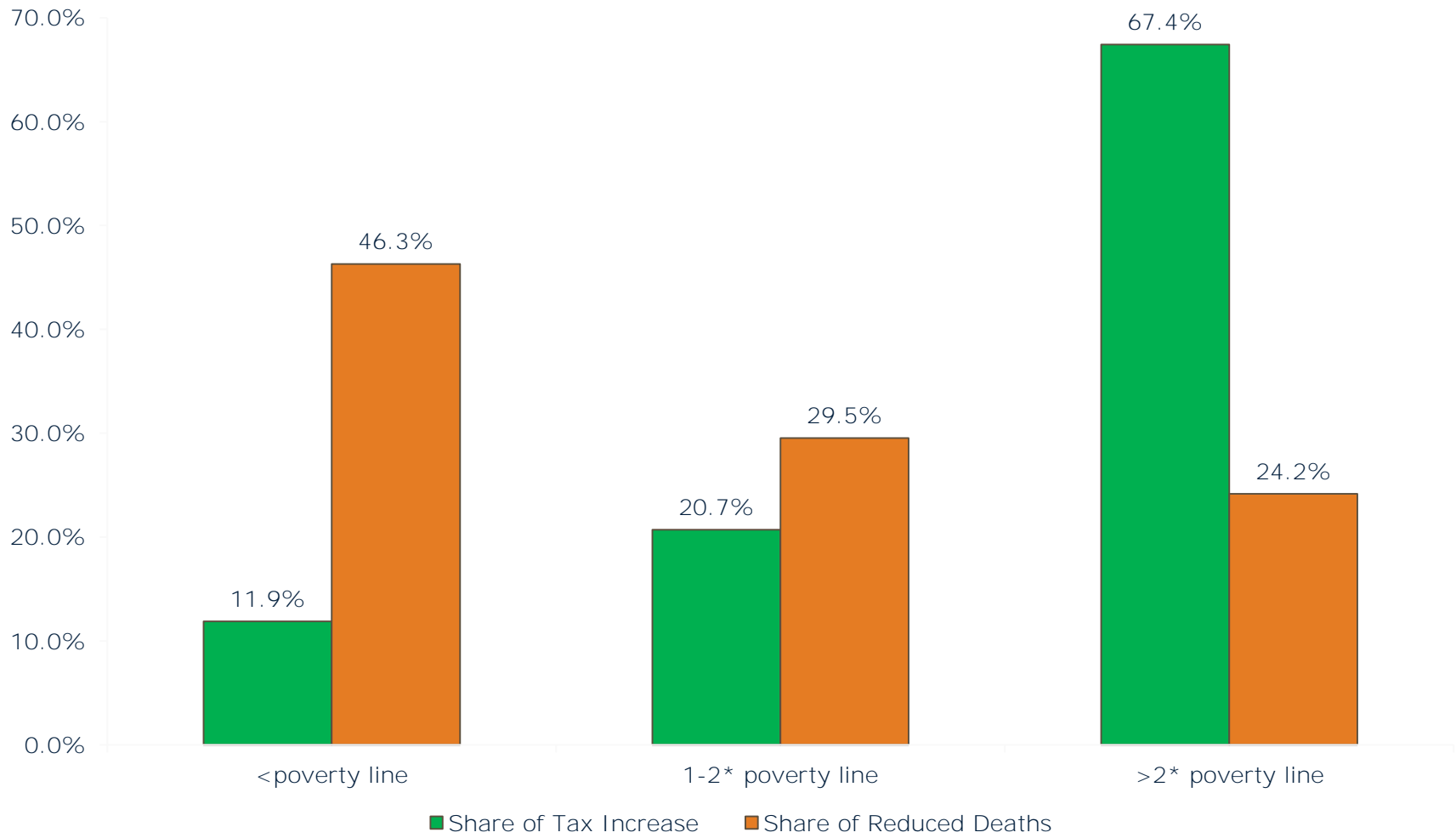
July 23, 2010 – San Francisco Examiner

- “Democrats are relying more heavily in their midterm 2010 election message that Republicans care nothing about the poor. Conveniently absent from this analysis is Republican opposition to President Barack Obama’s cigarette tax increase..... **While higher cigarette taxes do discourage smoking, they are highly regressive.** Analyzing a slightly less severe proposal in 2007, the Tax Foundation noted that ‘**no other tax hurts the poor more than the cigarette tax.**’” Peyton R. Miller, special to the Examiner.



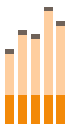
Who Pays & Who Benefits

Impact of Federal Tax Increase, U.S., 2009



Impact on the Poor

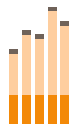
- Longer-term impact highly progressive
 - Less spending on health care to treat consequences of tobacco use
 - Improved health results in greater productivity, higher incomes
- Need to consider overall fiscal system
 - Key issue with tobacco taxes is what's done with the revenues generated by the tax
 - Greater public support for tobacco tax increases when revenues are used for tobacco control and/or other health programs
 - Net financial impact on low income households can be positive when taxes are used to support programs targeting the poor
 - Concerns about regressivity offset by use of revenues for programs directed to poor



Impact on Jobs

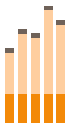
JULY, 14, 2010 – The Associated Press

- RICHMOND, Va. — The tobacco industry is running a full-court press ahead of a federal scientific panel's meeting to discuss how to regulate menthol cigarettes, a still-growing part of the shrinking cigarette market.
- The union representing nearly 4,000 tobacco workers sent a letter to the Food and Drug Administration committee examining the public health effects of the minty smokes, warning that a ban could lead to "severe jobs loss" and black market cigarettes.



Impact on Jobs

- Tobacco excise tax will lead to decreased consumption of tobacco products
 - Small loss of jobs in tobacco sector
- Money not spent on tobacco products will be spent on other goods and services
 - Gains in jobs in other sectors
- Increase in tax revenues will be spent by government
 - Additional job gains in other sectors
- Net increase in jobs in states like Hawaii



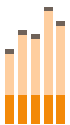
Tobacco Control & Business

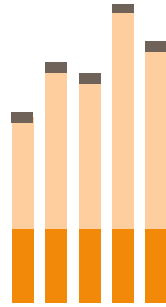
Impact of smoke-free policies on hospitality sector

- No or small positive impact of smoke-free policies on bar and restaurant business (IARC Handbook 13)

Impact of tobacco control policies on convenience stores (Huang and Chaloupka 2012)

- More business activity where cigarette taxes are higher
- No impact of smoke-free policies
- Overshifting and replacement purchase

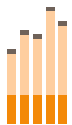
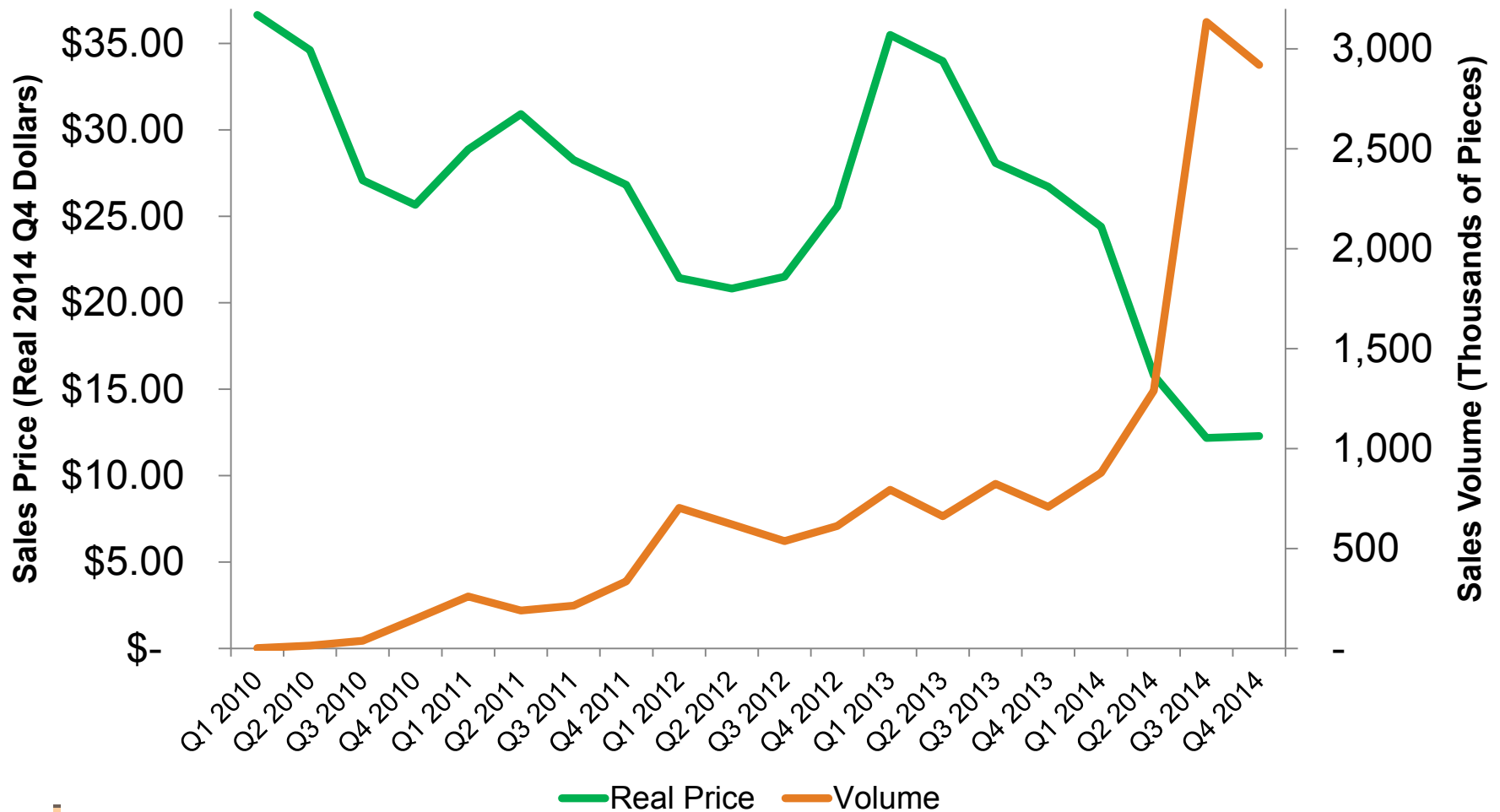




Vaping Product Taxation

Reusable E-Cigarettes

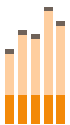
Sale Volume and Price, US 2010 - 2014



Impact of Price on Use of Vaping Products

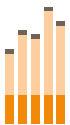
Evidence on the effects of prices on use of vaping products emerging; a few general conclusions:

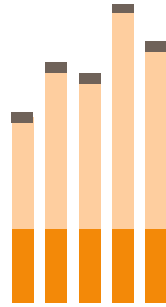
- E-cigarette demand is highly responsive to price
 - More responsive to price than cigarette demand
- Youth e-cigarette demand more responsive to price than youth cigarette demand
- Growing evidence of substitution between cigarettes and e-cigarettes
- No evidence on demand for heated tobacco products



Vaping Product Taxation

- Increasing number of governments taxing vaping products
 - 30 countries, 27 U.S. jurisdictions have implemented or will soon implement excise or excise-like taxes on vaping products
 - Rationale/objectives for taxes are often unclear
- Wide variety of tax structures and tax rates
- Little evidence on experiences with implementing and/or collecting taxes
- Recent interviews with state/local tax administrators in jurisdictions that have imposed taxes in the U.S.
 - Some preliminary recommendations based on their experiences

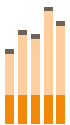




Tax Structure

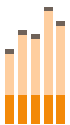
Taxing Vaping Products

- Question: Ad valorem or specific tax?
 - Some apply ad valorem tax
 - Including: Bahrain, Indonesia, Jordan, Saudi Arabia, United Arab Emirates, and several U.S. jurisdictions (AK-Juneau, MatSu Borough; CA; DC; IL; ME; MD; MN; NV; NY; PA)
 - Many others apply specific
 - Including: Albania, Azerbaijan, Croatia, Cyprus, Estonia, Finland, Georgia, Greece, Hungary, Italy, Kazakhstan, Kyrgyzstan, Kenya, Latvia, Lithuania, Montenegro, Philippines, Poland, Portugal, Romania, Russia, Serbia, Slovenia, Sweden, and several U.S. jurisdictions (Chicago, Cook County IL, DE, KS, LA, NC, OH, WA, WV, WI)
 - Some automatic increases for inflation (Kyrgyzstan, Philippines)



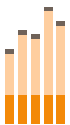
Taxing Vaping Products

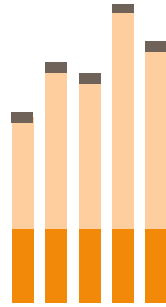
- Question: Ad valorem or specific tax?
 - Some apply mixed or differential tax
 - South Korea: KRW 1799.2572/ml plus KRW 24.4/20 cartridges
 - Chicago: specific tax per unit (\$1.50) AND specific tax based on volume of vaping solution (\$1.20/ml)
 - New Jersey: \$0.10/ml nicotine liquid OR 10% retail price for container e-liquids
 - New Mexico: 12.5% of manufacturer price for nicotine liquid OR \$0.50/cartridge
 - Washington: \$0.27/ml (\leq 5ml container) OR \$0.09/ml ($>$ 5 ml container)
 - My view: apply uniform ad valorem tax
 - Helps minimize differences in taxes based on types of product
 - Simpler to administer than more complex tiered/differential tax structures



Taxing Vaping Products

- Question: If ad valorem, applied on what price?
 - Some apply on retail price
 - Indonesia: 57% of tax-inclusive retail price
 - Bahrain (200%), Saudi Arabia (100%) and UAE (100%) of pre-tax retail price
 - New York: 20% 'special sales tax' on retail price
 - Others apply to wholesale/distributor price
 - Most U.S. jurisdictions apply to wholesale or distributor price
- My view: apply based on tax-inclusive retail price
 - Minimizes some types of tax avoidance
 - Reduces challenges resulting from non-traditional distribution chains
 - Tax appears in shelf price

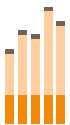




Taxing Solutions, Devices, and/or Components Used in Vaping Products

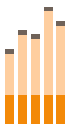
Taxing Vaping Solutions

- Question: Tax all liquids or just those that contain nicotine?
 - Some tax any liquid used for vaping
 - Including: Azerbaijan, Croatia, Cyprus, Estonia, Finland, Georgia, Greece, Hungary, Italy, Kazakhstan, Kenya, Latvia, Lithuania, Montenegro, Philippines, Poland, Russia, Saudi Arabia, Serbia
 - Kansas, North Carolina, New York, Washington
 - Others tax only liquids containing nicotine
 - Including: Albania, Bahrain, Indonesia, Jordan, Krygyzstan, Portugal, Romania, Slovenia, Sweden
 - Most U.S. states/localities that tax
- My view: tax all liquids used in vaping
 - Eliminates need for taxing authority to determine whether or not product contains nicotine



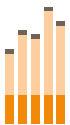
Taxing Vaping Solutions

- Question: Differential tax based on nicotine content?
 - Most apply same tax regardless of nicotine content
 - Some apply differential tax based on nicotine content
 - Italy: €0.082074/ml if contains nicotine; €0.041037/ml if no nicotine
 - Latvia: €0.01/ml plus €0.005/mg nicotine
- My view: do not tax based on nicotine content
 - Simplifies tax administration by eliminating need for taxing authority to determine nicotine concentration



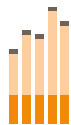
Taxing Vaping Solutions

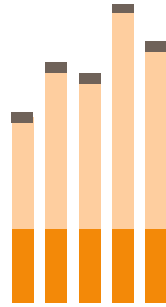
- Question: Tax products with any nicotine or with nicotine derived from tobacco?
 - Unclear for most
 - Some clearly apply to only nicotine derived from tobacco
 - Indonesia: applies to ‘extracts and essences of tobacco’
 - Minnesota: applies definition of other tobacco products, which includes products containing nicotine derived from tobacco
- My view: if taxing only products containing nicotine, tax all regardless of source of nicotine
 - Eliminates need for taxing authority to determine whether or not nicotine is derived from tobacco, other plants, or synthetic



Taxing Vaping Devices

- Question: Tax devices/components or not?
 - Most governments do not apply unique tax on devices
 - Some do tax devices:
 - Kenya: KSH 3,000/device; Jordan: 200% sales tax on devices and paraphernalia; Russia: RUB 48/device; Saudi Arabia: 100% of retail price; Several US states/localities: 'any product containing or delivering nicotine'
 - A few with ad valorem taxes apply to devices only if they include vaping solution:
 - California (59.27%) and Illinois (15%) of wholesale price for nicotine liquid or product containing nicotine liquid
 - Minnesota: 95% of wholesale price (but trying to separately determine value of liquid only)
- My view: do not tax devices/components
 - Adds complications to tax administration, given diversity of devices and ability of users to make their own
 - If ad valorem, then tax devices that contain vaping solution (e.g. disposable e-cigarettes, starter kits)





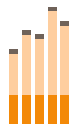
Taxing Vaping Products

-

Other Issues

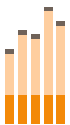
Taxing Vaping Products

- Question: Where to collect?
 - Manufacturer/Importer?
 - Distributor?
 - Retailer?
 - Varied approaches in different jurisdictions
 - Complicated by non-traditional distribution chains
 - Many products go directly from manufacturer or importer to retailer
 - Retailer can also be manufacturer
 - Significant share of online sales
- My view – collect from retailers (including online vendors) given challenges associated with non-traditional distribution chains



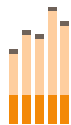
Taxing Vaping Products

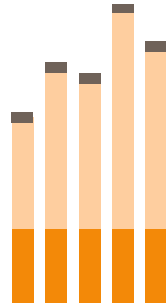
- Question: What tax rate/level?
- Enormous variability in tax rates
 - In U.S., specific taxes range from \$0.05/ml (DE, KS, LA, NC, WI) to \$1.20/ml + \$1.50/unit in Chicago; ad valorem range from 15% (IL) to 96% (DC)
 - Similar variability globally
 - Some with zero rate (Croatia, Kazakhstan)
- Considerable variability relative to taxes on cigarettes
 - Some governments aim to tax equivalently (e.g. CA, MN)
 - Fewer tax at higher effective rates (e.g. Indonesia)
 - Most tax at lower rates
 - Rationale for relative rates unclear
- My view – tax parity with cigarettes
 - If/when FDA determines that a products is a modified risk tobacco products, implying a significant public health benefit, then tax at a lower rate (e.g. Connecticut taxes MRTPs at 50% of cigarette tax rate)



Taxing Vaping Products

- Question: What is the revenue potential?
- Revenue replacement often used as argument for taxing vaping products
- But revenue potential is small in most jurisdictions
 - Relatively low use
 - Data on revenues from vaping product taxes are very difficult to obtain
 - Where data are available, suggest that revenues are minimal
 - CA: nearly \$1.9 billion from cigarette taxes vs. ~\$32 million from vaping taxes
 - MN: \$525 million from cigarettes; \$11 million from vaping taxes
- My view – if revenue generation/replacement is objective, raise taxes on cigarettes when implementing vaping product taxes

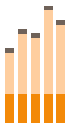




Summary and Potential Impact of Tax Increase

Summary

- Increases in tobacco product taxes and prices lead to significant reductions in tobacco use
- Claims of negative economic impact of tax and price increases and other effective tobacco control measures are false or greatly exaggerated
- Taxation of vaping products would affect their use, but many challenges in tax administration



THANK YOU!

For more information:

Tobacconomics

<http://www.tobacconomics.org>

 @tobacconomics

fjc@uic.edu

 **tobacconomics**
Economic Research Informing Tobacco Control Policy

Policy Brief | October 2018

Tobacco Control Policies and Employment

Introduction

Tobacco companies commonly argue that because they contribute to the economy by creating jobs, tobacco control policies, such as increasing tobacco taxes, would significantly hurt overall employment and the economy. However, the empirical evidence suggests the opposite. Tobacco control policies do lead to a decline in tobacco consumption and that may eventually cause a small number of jobs to be lost in the tobacco sector. However, the money saved by consumers from not using tobacco products is then spent on goods and services produced in other sectors, resulting in job gains in those sectors of the economy. Governments also spend new revenues from tax increases typically on labor intensive activities, such as services or infrastructure investments. Moreover, employment in the tobacco sector has been declining regardless of tobacco control policies. These declines are driven by the tobacco industry's strategies to use cost-saving capital intensive technologies, consolidation of production and privatization.

This policy brief discusses the impact of tobacco control policies on employment, based on trends and empirical evidence. The discussion is mainly based on the U.S. NCI and WHO 2016 Monograph, "The Economics of Tobacco and Tobacco Control".

Trends in Tobacco Employment

Classification of Tobacco Employment
Jobs created by the tobacco industry can be either directly, partially, or indirectly related to the tobacco sector. Jobs directly related to tobacco refer to those in tobacco farming and manufacturing. Jobs that are partially related to tobacco are jobs in wholesale and retail services. Indirectly related jobs or tobacco-expenditure induced employment include those in other sectors of the economy generated by a multiplier effect of spending the income earned in jobs directly linked to tobacco on other goods and services. Partially and indirectly related jobs are created by all industries, not just the tobacco industry.

Tobacco Farming and Manufacturing Jobs Limited to a Few Countries

In 2000, 65 percent of worldwide tobacco growing was concentrated in only 5 countries, and by 2016, that share has reached 71 percent (Figure 1). In its 2014 report, the International Labor Organization (ILO) estimated a significant decline in employment in most major tobacco-growing countries during the past couple decades.² The share of tobacco farming employment in total employment declined for most countries except for India and Zimbabwe (Figure 2). Similarly, more than 80 percent of worldwide tobacco manufacturing jobs were

 **tobacconomics**
Economic Research Informing Tobacco Control Policy

Policy Brief | April 2019

Economic Costs of Tobacco Use

Introduction

Tobacco use accounted for more than seven million deaths globally in 2015 (around five million men and two million women). Around 80% of the deaths attributed to tobacco use occurred in low- and middle-income countries (LMICs).¹ Tobacco use imposes a significant

economic cost of smoking is estimated at around \$US 1.85 trillion, or around 1.8% of global GDP. Therefore, a significant increase in tobacco taxes can help close the gap between the cost of tobacco use and the revenue generated from taxes on tobacco sales.

ADDICTION

RESEARCH REPORT

SSA SOCIETY FOR THE STUDY OF ADDICTION

doi:10.1111/add.14119

E-cigarette price sensitivity among middle- and high-school students: evidence from monitoring the future

Michael F. Pesko¹, Jidong Huang², Lloyd D. Johnston³ & Frank J. Chaloupka⁴

Department of Economics, Georgia State University, Atlanta, GA, USA¹; School of Public Health, Georgia State University, Atlanta, GA, USA²; Institute for Social Research, University of Michigan, Ann Arbor, MI, USA³ and Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, Chicago, IL, USA⁴

ABSTRACT

Aims We estimated associations between e-cigarette prices (both disposable and refill) and e-cigarette use among middle and high-school students in the United States. We also estimated associations between cigarette prices and e-cigarette use.

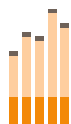
Design We used regression models to estimate the associations between e-cigarette and cigarette prices and e-cigarette use. In our regression models, we exploited changes in e-cigarette and cigarette prices across four periods of time and across 50 markets. We report the associations as price elasticities. In our primary model, we controlled for socio-demographic characteristics, cigarette prices, tobacco control policies, market fixed effects and year-quarter fixed effects.

Setting United States of America. **Participants** A total of 24 370 middle- and high-school students participating in the Monitoring the Future Survey in years 2014 and 2015. **Measurements** Self-reported e-cigarette use over the last 30 days. Average quarterly cigarette prices, e-cigarette disposable prices and e-cigarette refill prices were constructed from Nielsen retail data (inclusive of excise taxes) for 50 US markets. **Findings** In a model with market fixed effects, we estimated that a 10% increase in e-cigarette disposable prices is associated with a reduction in the number of days vaping among e-cigarette users by approximately 9.7% [95% confidence interval (CI) = -17.7 to 1.8%; $P = 0.02$] and is associated with a reduction in the number of days vaping by the full sample by approximately 17.9% (95% CI = -31.5 to -4.2%; $P = 0.01$). Refill e-cigarette prices were not statistically significant predictors of vaping. Cigarette prices were not associated significantly with e-cigarette use regardless of the e-cigarette price used. However, in a model without market fixed effects, cigarette prices were a statistically significant positive predictor of total e-cigarette use. **Conclusions** Higher e-cigarette disposable prices appear to be associated with reduced e-cigarette use among adolescents in the US.

Keywords E-cigarettes, electronic nicotine delivery systems, price sensitivity, tobacco control, tobacco use, youth.

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Submitted 3 April 2017; initial review completed 17 July 2017; final version accepted 21 November 2017



San Francisco Flavor Ban and Its E-Cigarette Law

Dr. Valerie Yerger
Professor in Health Policy
University of California, San Francisco

Founding Member
African American Tobacco Control Leadership Council

Hearing CPH-HLT-CPC
October 17, 2019



Family Smoking Prevention and Tobacco Control Act, 2009

Granted the FDA the authority to regulate tobacco products to protect the public health

**The Tobacco
Control Act
of 2009**

**Unintended
Consequences**

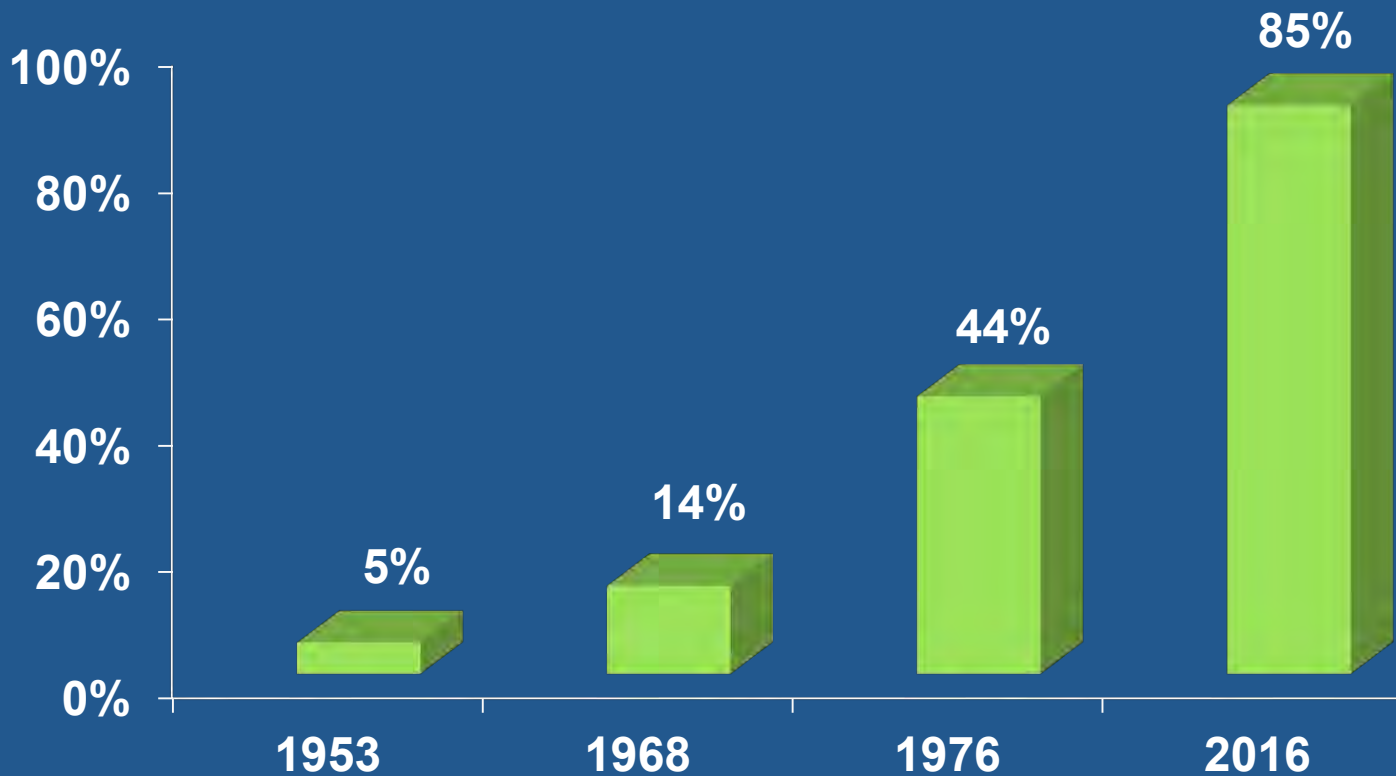
PROTECTED

Newport

Newport



Menthol Use Among African American Adult Smokers



Sources: 1) Gardiner PS. The African Americanization of menthol cigarette use in the United States. *Nicotine Tob Res* 2004;6 suppl 1:S55-65. 2) Lorillard, 1986; TID: ybv44a00; Giovino et al 2016.

Lorillard

MEMORANDUM

CONFIDENTIAL

September 18, 1987

TO: K.P. Augustyn
FROM: M.S. Liebow
RE: NEWPORT FIELD VISIT: LOS ANGELES

This reports my observations and findings from my recent field trip to Los Angeles, California; and recommends next steps.

I. PURPOSE

Los Angeles is one of the recommended MOP markets for 1988. This report, fourth in a series of indepth market reviews, provides a general background of LA's marketing environment including Newport's current business, competitive business, and other factors which may impact any type of Marketing and Sales program.

II. SUMMARY

- The competition is centering their marketing efforts in the low income black communities.

- Newport is well supported in Out-of-Home, but lacks promotional image reinforcement.
- The menthol category is extremely large, ranking third in terms of national tonnage. However, the overall market skews more to non-menthol brands with key menthol sales development indices below average.
- The competition is centering their marketing efforts in the low income black communities.
- The geographic area is immense, covering five full Divisions, and a assortment of different ethnic groups and races.

In general, I believe Los Angeles offers significant additional volume opportunities for Newport. However, the brand must be more aggressively marketed to less developed target segments.

Therefore, I recommend we continue the development of the MOP program in Los Angeles.

87057630

“The Racialized Menthol Wars”

- Major tobacco companies aggressively competed against one another in low-income neighborhoods
- Tobacco companies targeted these neighborhoods with highly concentrated menthol marketing
- Used innovative marketing tactics to adapt to inner city challenges and to exploit residents
- Inner city communities represented efficient sites for an industrial exploitation (1980s and 1990s)

Yerger VB, Przewoznik J, & Malone RE (2007). Racialized geography, corporate activity, and health disparities: Tobacco industry targeting of lower income inner city residents. *Journal of Health Care for the Poor and Underserved*, 18(S4), 10-38.

MENTHOL IS A SOCIAL INJUSTICE



**DYING FOR A
MENTHOL?**

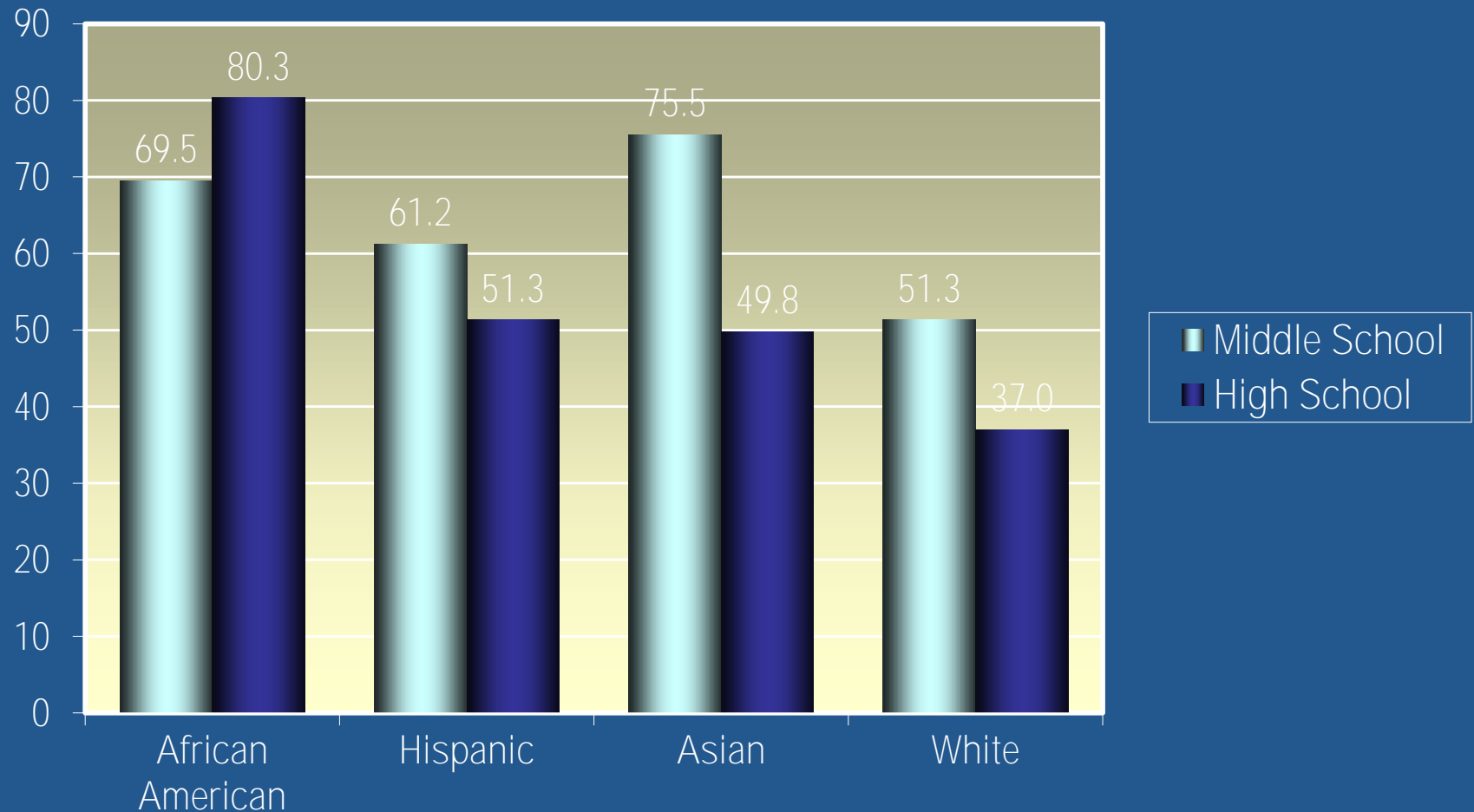
THEY TELL YOU THE TASTE IS COOL, BUT 43,000
AFRICAN AMERICANS DIE
EACH YEAR FROM SMOKING-RELATED DISEASES.
MOST OF THEM SMOKE MENTHOL.

HOW COOL IS THAT?

Undo the death toll. call 1-800-NO-BUTTS

Menthol Cigarette Use Among Youth

Percentages - youth smoking a usual brand of cigarettes



Hersey J, et al. (2006) Are menthol a starter product for youth?

Nicotine and Tobacco Research. 8(3):403-413

Explosion of Other Flavored Tobacco Products

- Most teens who use tobacco start with a flavored tobacco product (Ambrose, 2015)



Newport

Local Policy Options

BAN RESTRICT SALES

Marlboro

MIDNIGHT

BOLD UNIQUE MENTHOL FLAVOR



GENERAL WARNING:
Quitting Smoking Now
Greatly Reduces Serious
Risks to Your Health.

CIGARETTES

A photograph of the Golden Gate Bridge in San Francisco, taken at dusk or dawn. The bridge's iconic orange-red towers and suspension cables are silhouetted against a dark, overcast sky. The water of the bay is visible in the foreground and middle ground. The overall mood is somber and atmospheric.

San Francisco Menthol/Flavor Ban

Flavored Policies Considered for San Francisco

- Buffer Zones around schools
- Restrict sales to adult only tobacco shops
- Citywide ban
- Would include menthol cigarettes



**San Francisco “Citywide Ban”
ordinance introduced by
Supervisor Malia Cohen**

April 18, 2017





**July 7, 2017: Signed into law by Mayor Ed Lee
Effective April 1, 2018 but....**

R.J. Reynolds Tobacco Company

**Dumped \$11.5 Million
to Fight San Francisco Ban**

NO **ON** **E**

STOP the Prohibition Proposition

Paid for by No on Prop E - Stop the Prohibition Proposition, A Coalition of Concerned Citizens
Supporting Freedom of Choice, Adult Consumers, Community Leaders, and Neighborhood Small
Businesses, Committee Major Funding from

R.J. Reynolds Tobacco Company

Financial disclosures are available at sfethics.org.

**YES
ON**



**SFKIDS
VS
BIG
TOBACCO**



Community Engagement

DELTA SIGMA THETA SORORITY, INC.

A SERVICE SORORITY

Grand Chapter

A RESOLUTION TO SUPPORT STATE AND LOCAL EFFORTS TO RESTRICT THE SALE OF MENTHOL CIGARETTES AND OTHER FLAVORED TOBACCO PRODUCTS

WHEREAS, tobacco use claims 45,000 African American lives a year, killing more African Americans than murders, AIDS, illegal drug use, alcohol use, suicides, and car accidents COMBINED;

Passed at 53rd National Convention Las Vegas, Aug 2017

WHEREAS, predatory marketing of tobacco to the African American Community continues to cause tobacco-related disparities;

WHEREAS, the tobacco industry has a well-documented history of targeting African Americans with “culturally friendly” advertising of menthol cigarettes, perpetuating the tobacco industry’s historic practices of targeting vulnerable populations, which a tobacco industry executive dismissingly described as “the young, the poor, the black and stupid;”

WHEREAS, some 85% of African American smokers 12 years of age and older use menthol cigarettes (as opposed to 29% of white smokers);

WHEREAS, tobacco manufacturers add menthol to cigarettes to mask the harsh taste of tobacco and alleviate the irritating effects of nicotine, making menthol cigarettes particularly attractive to kids;



NAACP Adopts Menthol Resolution

July 19, 2016

Calling on chapters to support state and local efforts to regulate menthol cigarettes and other flavored tobacco products

October 15, 2016

National Board of Directors ratified resolution





MAYOR'S PRESS CONFERENCE

4/18/17

Landmark Flavored Tobacco Ordinance



BREATHE[®]
CALIFORNIA

Golden Gate Public Health Partnership



**AMERICAN
LUNG
ASSOCIATION[®]**



SAN FRANCISCO TOBACCO FREE COALITION

Staffed by SFPDH- Tobacco Free Project
25 Van Ness Ave. Suite 345, San Francisco, CA 94102



ANR AMERICANS FOR NONSMOKERS' RIGHTS

Defending your right to breathe smokefree air since 1976





“All Hands on Deck” Approach

- African American Tobacco Control Leadership Council
- American Cancer Society Cancer Action Network
- American Heart Assoc
- American Lung Assoc
- Americans for Nonsmokers’ Rights
- APPEAL
- Bay Area Community Resources
- Boys and Girls Clubs of San Francisco
- Breathe California: Golden Gate Public Health Partnership
- Cameron House
- CLASH
- Campaign for Tobacco-Free Kids
- Delta Sigma Theta Sorority, Inc., San Francisco Alumnae Chapter
- Gracenter
- Healing 4 Our Families & Our Nation
- Pacific Islander Task Force
- RIDE
- Samoan Community Development Center
- San Francisco Dept of Public Health
- San Francisco Marin Medical Society
- San Francisco NAACP, San Francisco Branch
- San Francisco Tobacco Free Coalition
- San Francisco Unified School District
- University of California San Francisco
- Vietnamese Youth Development Center
- Youth Leadership Institute
- Zuckerberg General Hospital and Trauma Center

★★YOU★★
DECIDE

FLAVORED TOBACCO PRODUCTS BAN

SAN FRANCISCO PROPOSITION E

REPORTING 99%

YES ✓

100,380

68%

NO

46,389

32%

6:40

FOX★★YOU★★
DECIDE

@KTVU

NAPA MEASURE C - VINEYARD EXPANSION

REPORTING 100%

YES

NO

SEN. DIANNE FEINSTEIN ADVANCES TO THE NOVEMBER ELECTION;

Municipalities Prohibiting the Sale of Flavored Tobacco Products

Enacted as of July 1, 2019

122 municipalities in total have enacted laws restricting flavored tobacco sales in some manner. Those listed below prohibit the sales of all flavored tobacco products, **including menthol**, without exception.

The list does not include municipalities whose laws contain exemptions, such as allowing sales in specialty retail stores or in certain buffer zones, or allowing the sale of menthol flavored products.

Municipality	State
1. Alameda	CA
2. Albany	CA
3. Beverly Hills	CA
4. Corte Madera	CA
5. Half Moon Bay	CA
6. Hermosa Beach	CA
7. Lafayette	CA
8. Larkspur	CA
9. Marin County	CA
10. Portola Valley	CA
11. Richmond	CA
12. Sacramento	CA
13. San Anselmo	CA

Municipality	State
14. San Carlos	CA
15. San Francisco	CA
16. San Mateo County	CA
17. San Pablo	CA
18. San Rafael	CA
19. Santa Cruz	CA
20. Santa Cruz County	CA
21. Sausalito	CA
22. Yolo County	CA
23. Aspen	CO
24. Brookline	MA
25. Arden Hills	MN
26. Mendota Heights	MN

A photograph of the Golden Gate Bridge in San Francisco, taken at dusk or dawn. The bridge's iconic orange-red towers and suspension cables are silhouetted against a dark, overcast sky. The water of the bay is visible in the foreground and middle ground. The text "San Francisco ESD Ban" is overlaid in white, bold, sans-serif font in the center of the image.

San Francisco ESD Ban



**Introduced ordinance
that bans the sales of
JUULs and other e-
cigarettes (June 2019)**

**San Francisco Supervisor
Shamann Walton**

Would Replace SF's Current E-Cig Regulations with Ones Written By Juul

YES ON C

Stop Youth Vaping

[ABOUT](#)

[NEWS](#)

[GET INVOLVED](#)

[DONATE](#)

REGULATE DON'T BAN

STOP Youth Vaping

**REGULATE DON'T BAN
E-cigarettes**



[ABOUT THE CAMPAIGN](#)

[GET THE FACTS](#)

[GET INVOLVED](#)

[SUPPORTERS](#)

[DONATE](#)

Vote NO on Prop C

Big Tobacco is at it again. Juul is scheming to hook another generation of kids. Don't let them overturn our e-cigarette laws that protect our kids.

[GET INVOLVED](#)



Juul Suspends Campaign for Prop C

- Juul pulled the plug on its effort to pass Proposition C
- Supervisor Walton filed a formal complaint with the FDA about Juul
- Juul's private polling showed they were losing or at risk of losing?
- Unfortunately, Prop C remains on the ballot

Concluding Thoughts

- Menthol/flavor bans will save lives and reduce healthcare costs
- Eliminate e-cig sales to prevent a new generation from becoming addicted to nicotine
- Policies that fail to restrict the sales of menthol cigarettes will further entrench health inequities
- Don't leave behind anyone!



Formed in 2008. We educate the African American community about tobacco use and cessation, partner with community stakeholders and public health agencies to inform and affect the direction of tobacco control policy, practices, and priorities, as it affects the lives of Black American and African immigrant populations.

The logo graphic consists of three thick, black, curved lines that sweep upwards and to the right, resembling a stylized flame or a protective shield.

AATCLC

*The African American Tobacco
Control Leadership Council*

Saving Black Lives

www.savingblacklives.org

888.881.6619 x 105