

# Exploring the New Landscape of Tobacco Products and Nicotine Addiction

## NC Training and Technical Assistance Center

Jim Martin, MS , Director of Policy and Programs  
NC Tobacco Prevention and Control Branch  
NC Division of Public Health

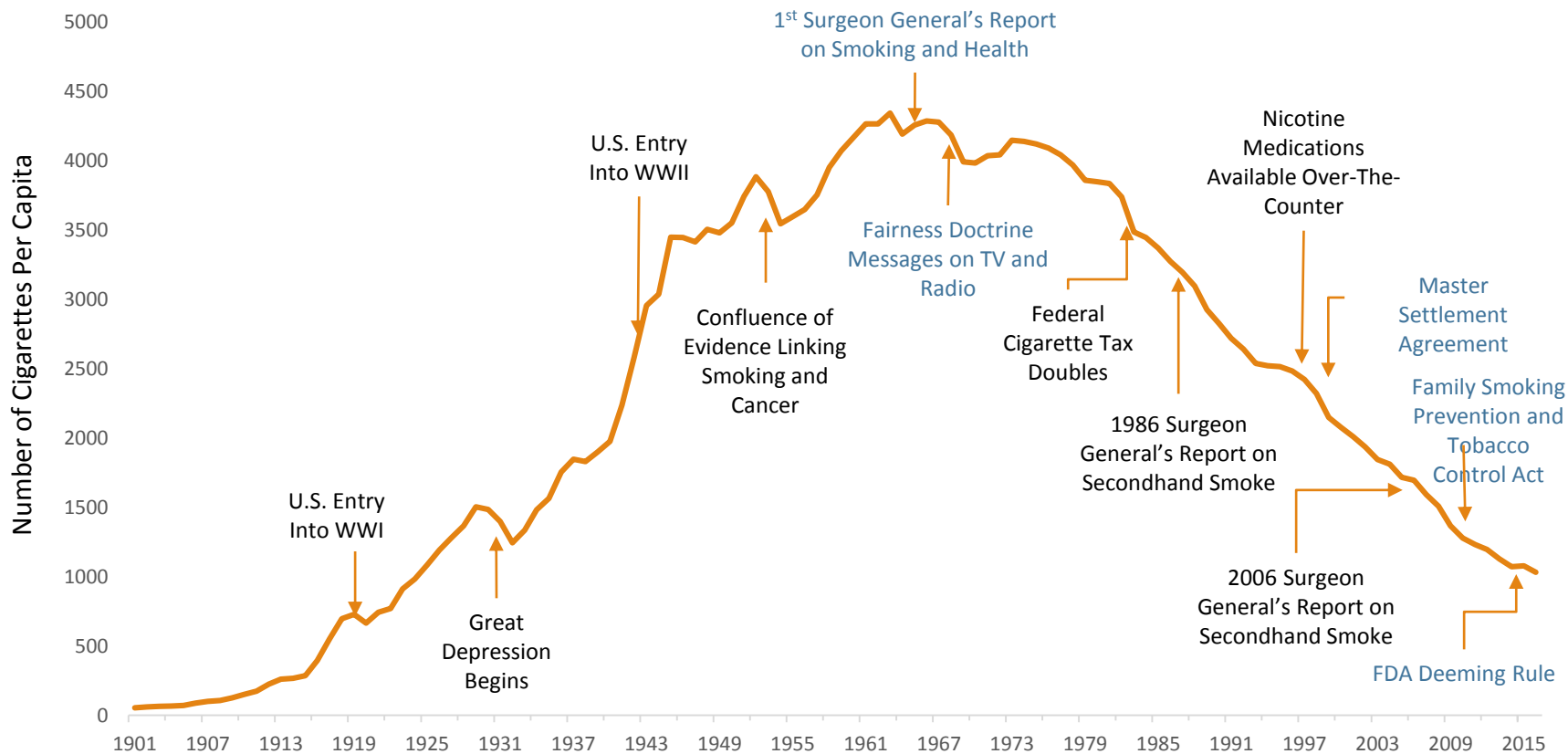
May 7, 2019

# Overview

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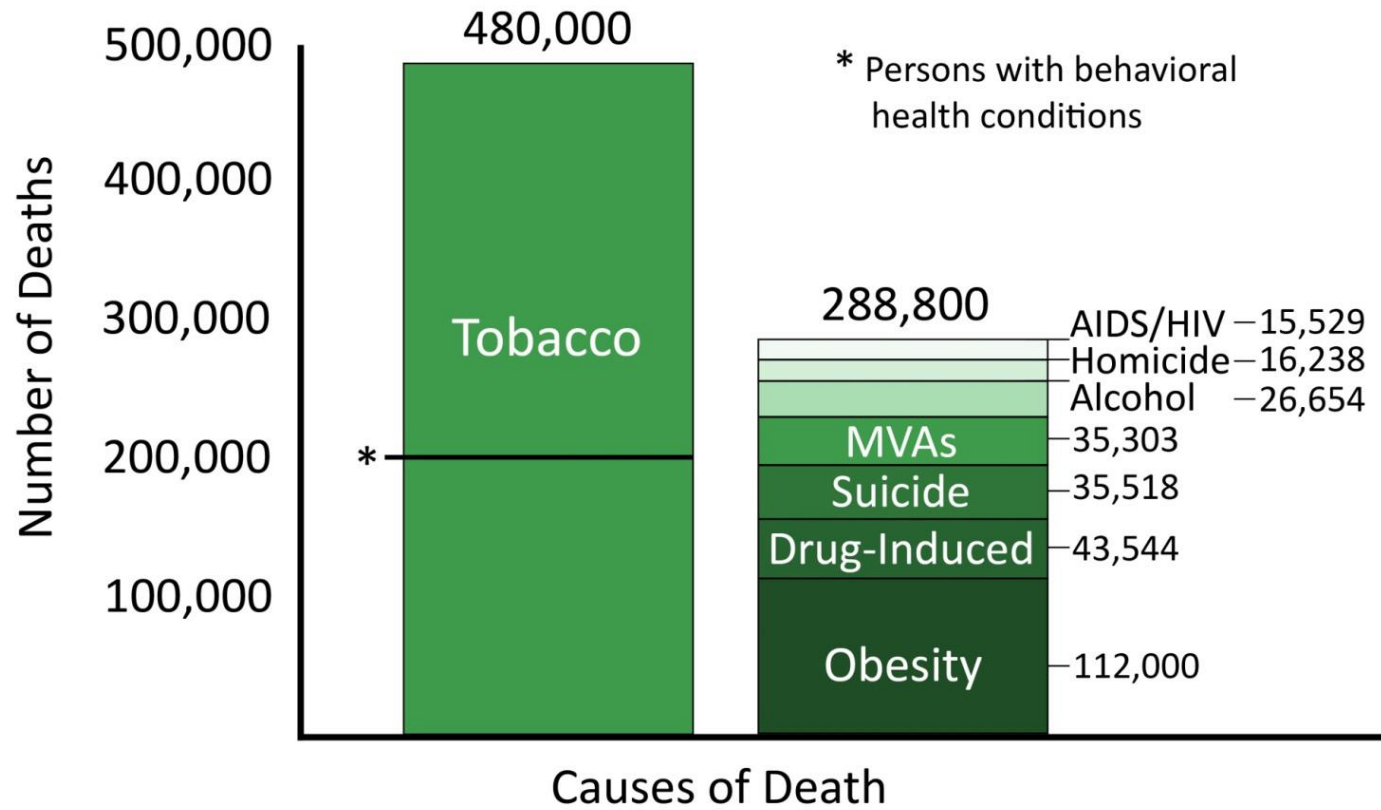
- The Toll of Tobacco Use
- Changing Landscape of Tobacco Products
- E-cigarettes, JUULs
- Nicotine Addiction
- Public Health Concerns
- Federal, State and Local Policies
- Tobacco-free Schools
- Examine Evidence-based Strategies and Resources
- Questions and Discussion

# Adult Per Capita Cigarette Consumption and Major Smoking- and-Health Events—U.S., 1900-2016



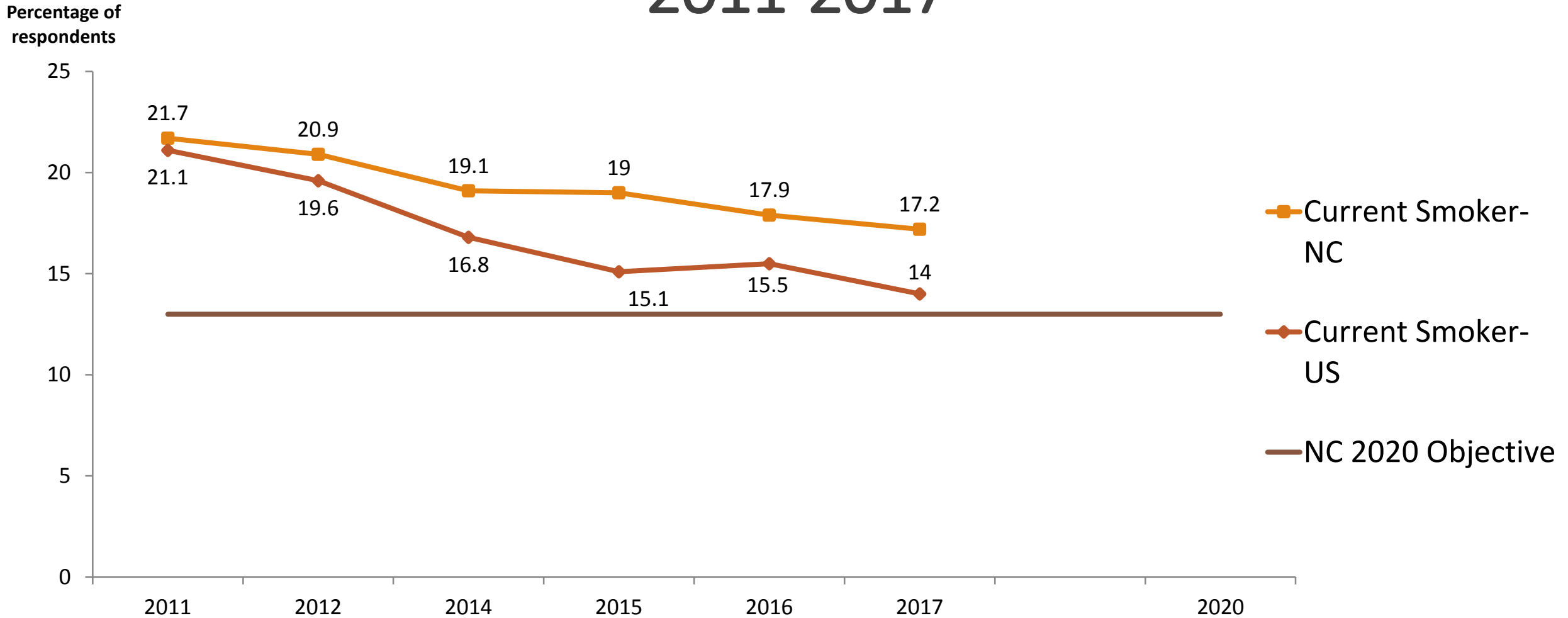
Sources: Adapted from Warner 1985 with permission from Massachusetts Medical Society, © 1985; U.S. Department of Health and Human Services 1989; Creek et al. 1994; U.S. Department of Agriculture 2000; U.S. Census Bureau 2016; U.S. Department of the Treasury 2016.

# Behavioral Causes of Death in the U.S.



Sources: U.S. Department of Health and Human Services. *The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Printed with corrections, January 2014.  
Mokdad et al; JAMA 2004; 291:1238-1245  
Mokdad et al; JAMA. 2005; 293:293

# Percentage of Adult Smokers in North Carolina BRFSS 2011-2017

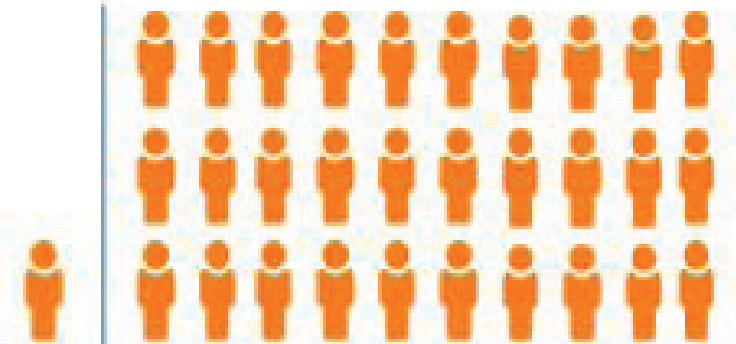


# The Burden of Tobacco Use in NC

**1 in 5**  
Deaths in NC due to  
tobacco use



For every death,  
**30**  
sick or disabled



Smoking costs  
North Carolina  
**\$3.81 billion**  
per year in  
health care costs



Including  
**\$931 million**  
in Medicaid costs.

There is an additional  
annual cost of  
**\$293 million**  
from health problems  
due to secondhand smoke.



The Health Consequences  
of Smoking—50 Years of Progress

A Report of the Surgeon General



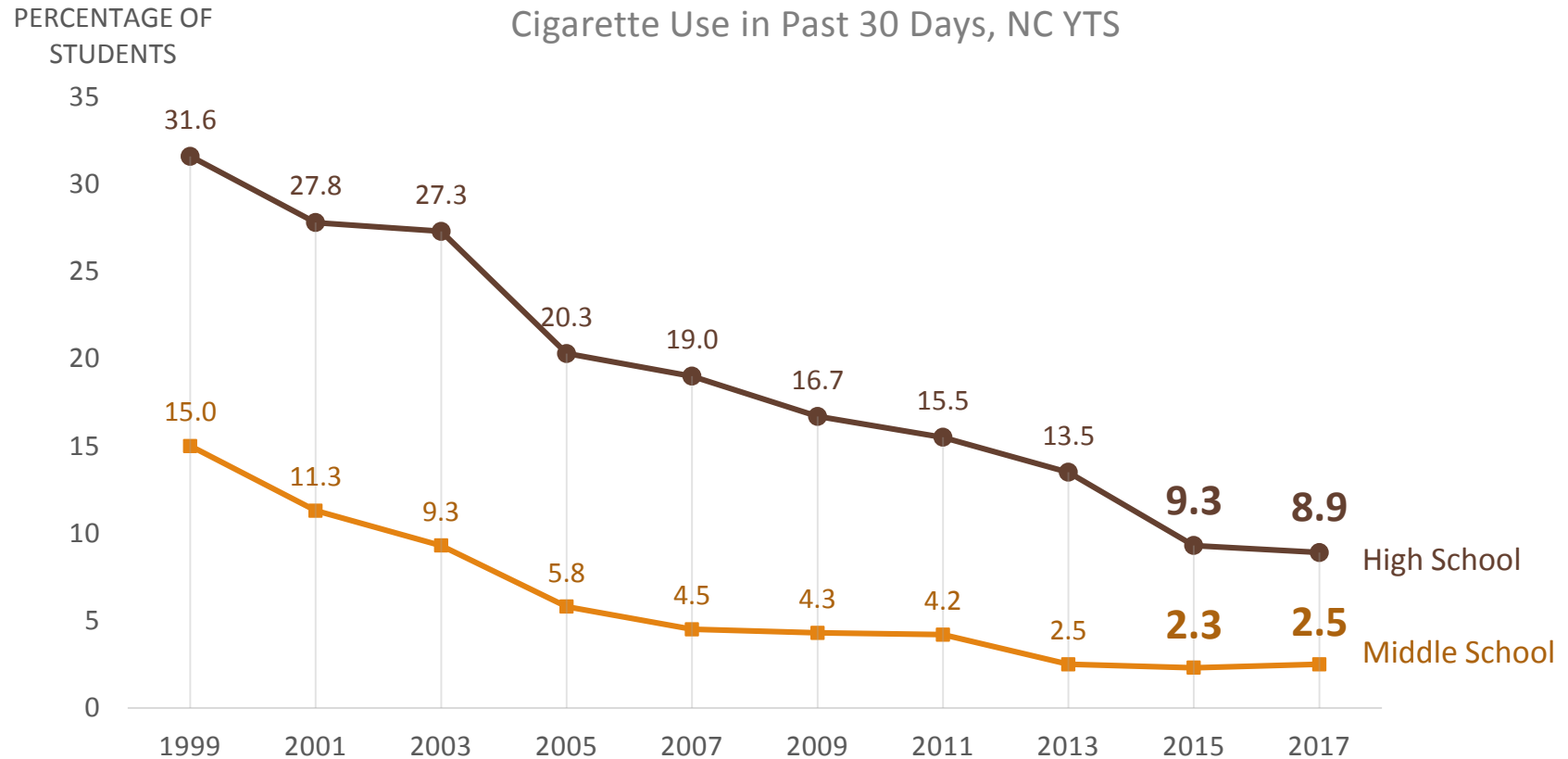
U.S. Department of Health and Human Services

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90%  
of tobacco users  
start before the  
age of 18



# Percentage of Youth Cigarette Smoking 1999-2017



# Changing Landscape of Tobacco Products



# Electronic Cigarettes



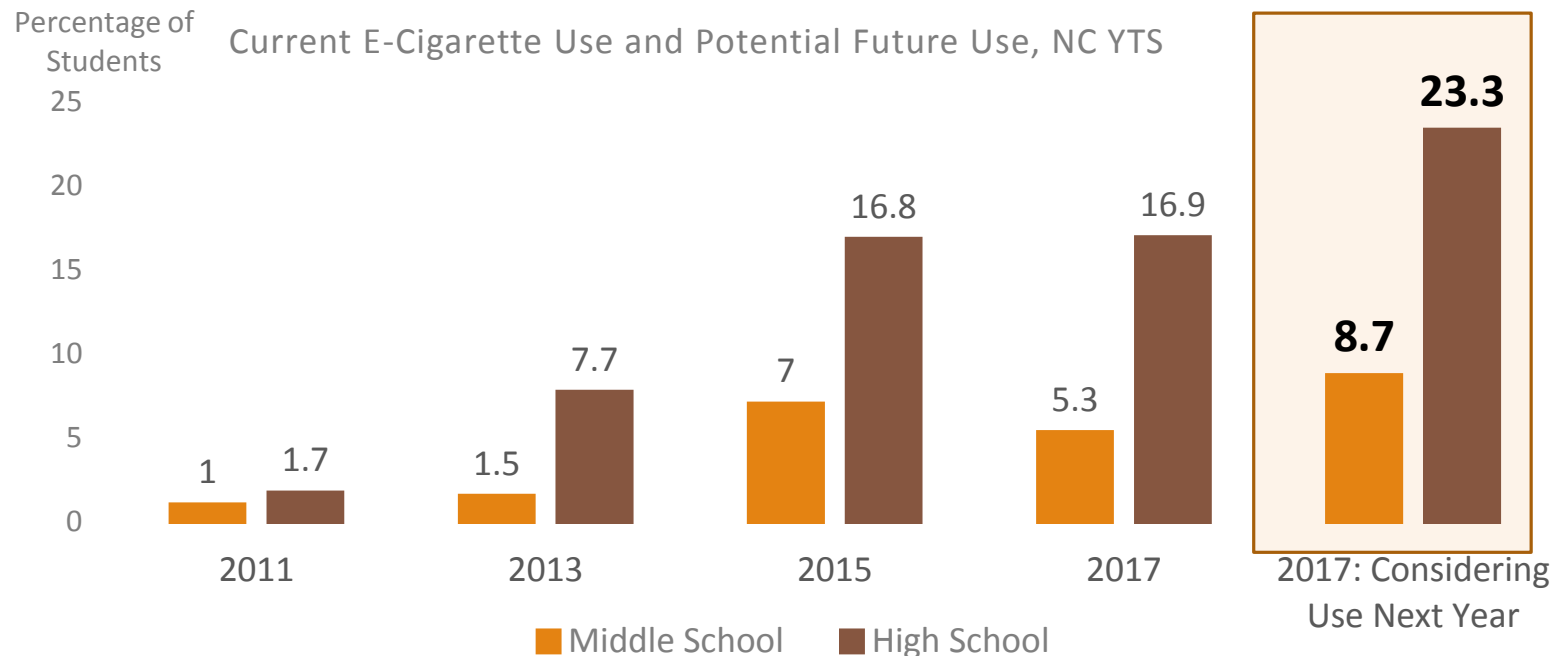
Image Source: Truth Initiative

## Between 2011-2017 Current Youth Use of E-Cigarettes Increased:

**430%** ↑  
Middle School

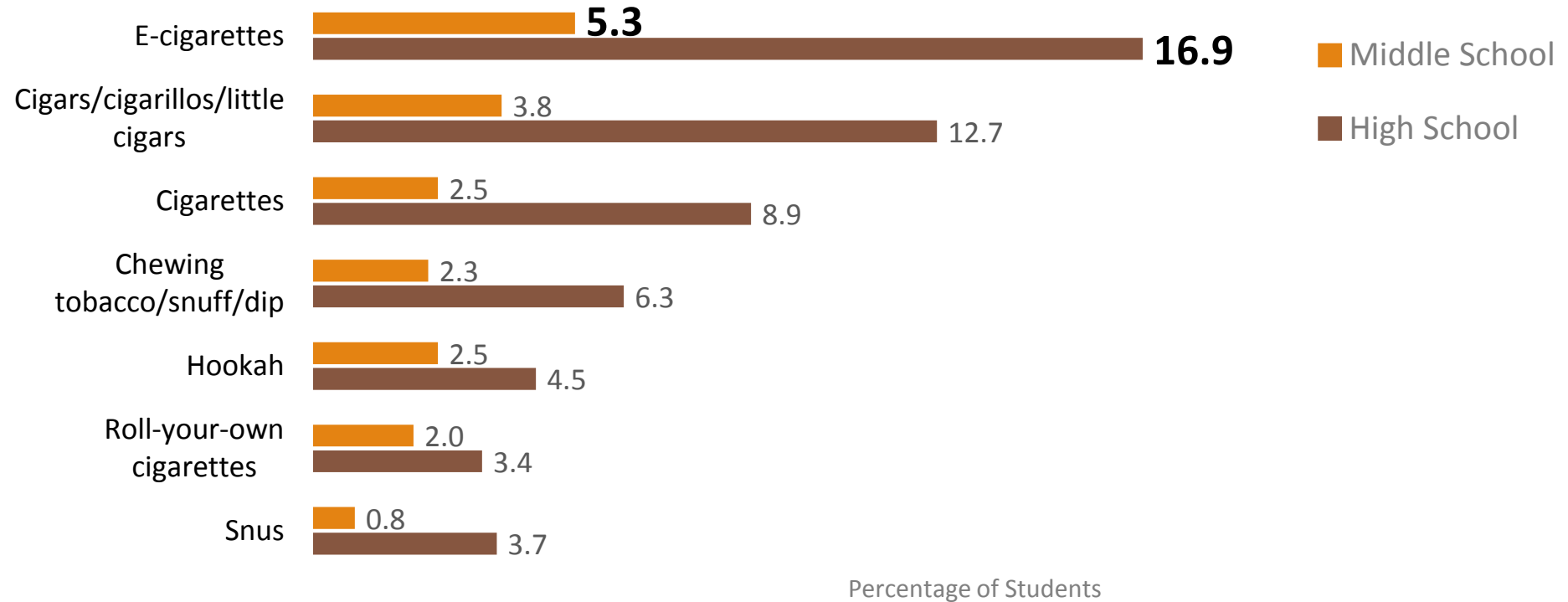
**894%** ↑  
High School

**In 2017 more students said they were considering using e-cigarettes in the next year than currently used them**

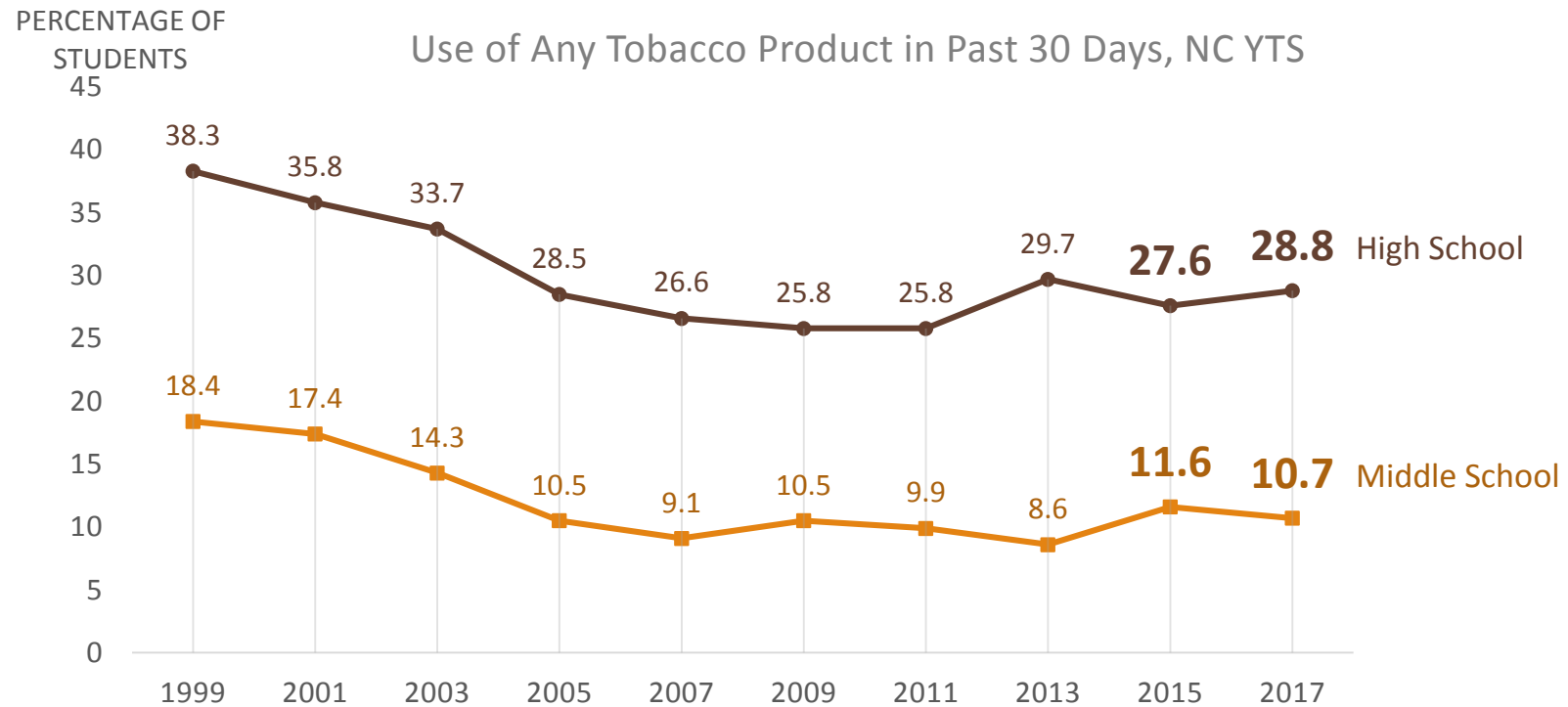


# E-cigarettes are still the #1 product used by youth

Use of Tobacco Products in Past 30 Days, NC YTS 2017

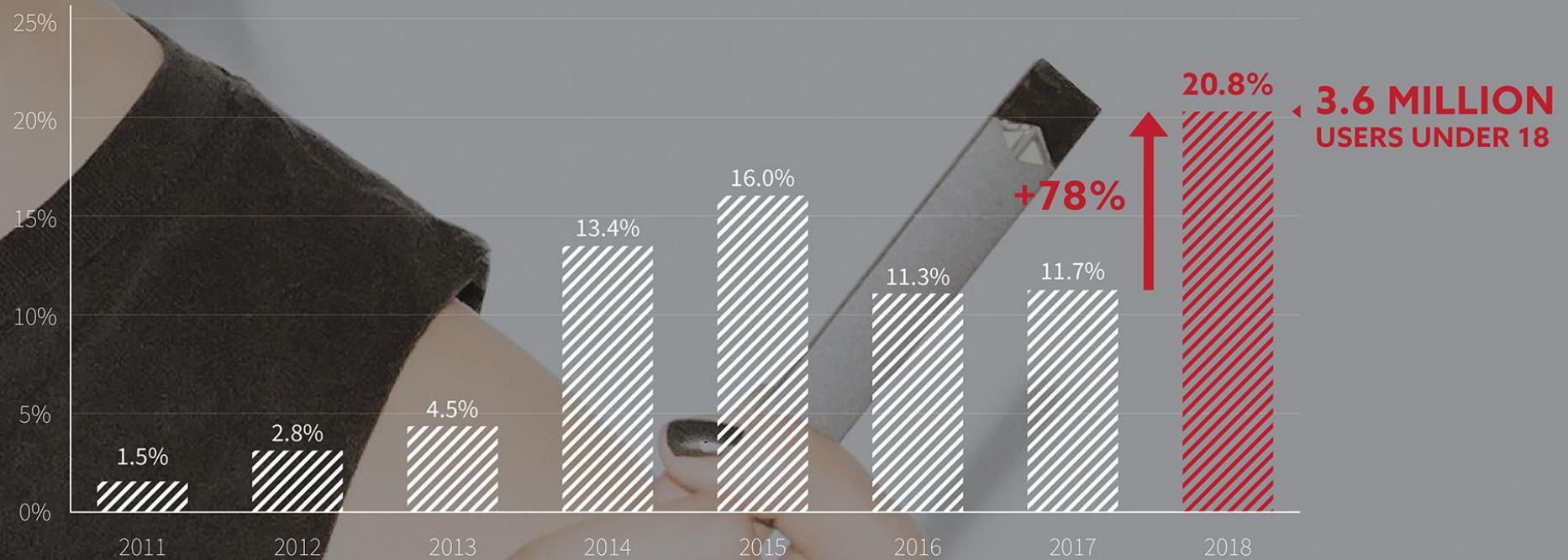


# Overall Percentage of Youth Tobacco Use 1999-2017



# YOUTH E-CIGARETTE USE **INCREASED 78% IN 2018**

*Percent of high schoolers who report using e-cigarettes in the past 30 days*



Source: CDC, National Youth Tobacco Survey (NYTS)

# NO MATTER WHAT YOU CALL IT, IT'S AN E-CIGARETTE



Disposables



Rechargeable –  
Replacement Cartridges



Rechargeable –  
Refillable Tank System



Mods



USB-Style

Image Source: Wake Forest Baptist Health; ecigaretteb2c.com



# E-Liquid Flavors and Brands

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Over 460 brands (Zhu et al., 2014)

7,764 unique flavors



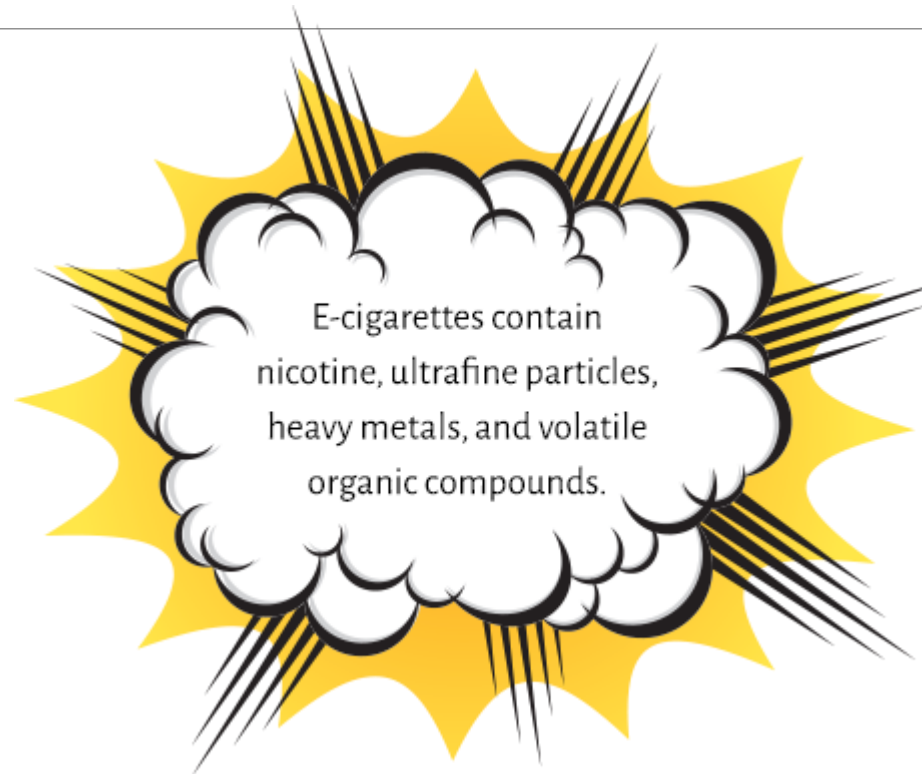
Image Sources:  
[www.ecigaretterevue.com](http://www.ecigaretterevue.com)

# *It's an Aerosol, Not a Vapor*



# Electronic Cigarette Aerosol

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“E-cigarette aerosol is not harmless. It can contain harmful and potentially harmful constituents, including nicotine.

Nicotine exposure during adolescence can cause **addiction and can harm the developing adolescent brain.**”

Brian King, P. M. (2015, October 20). CDC Public Health Grand Rounds. Retrieved from Centers for Disease Control and Prevention: <https://www.cdc.gov/cdcgrandrounds/archives/2015/october2015.htm>

# JUUL E-cigarette

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# JUUL's Sleek Design

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The JUUL device, with its sleek design that resembles a flash drive, is a special hit with teens.

Teens say:

"It's definitely more discreet"

"JUULs are so simple and easy to use"

"JUUL has multiple flavors"

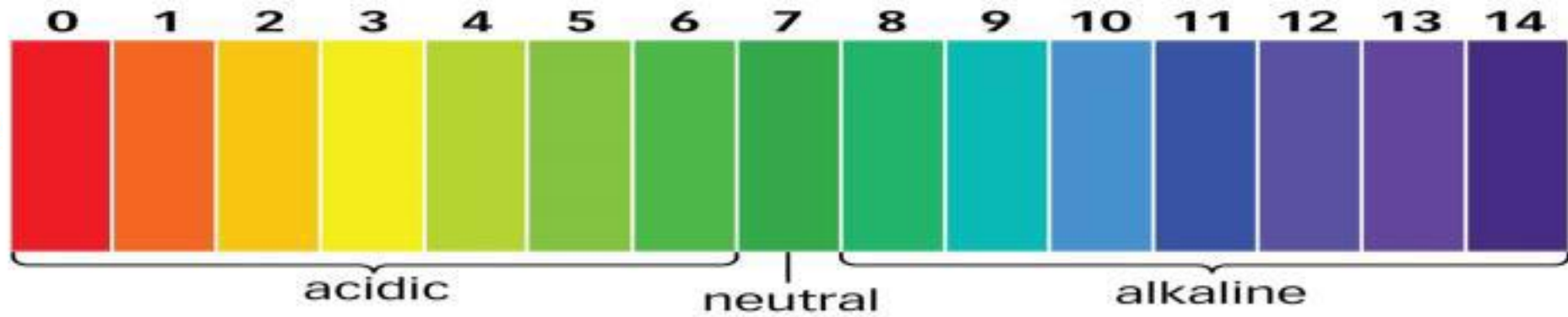
"This is not vaping, it is Juuling"





# Nicotine Comes In Different Types

What is the  
pH scale



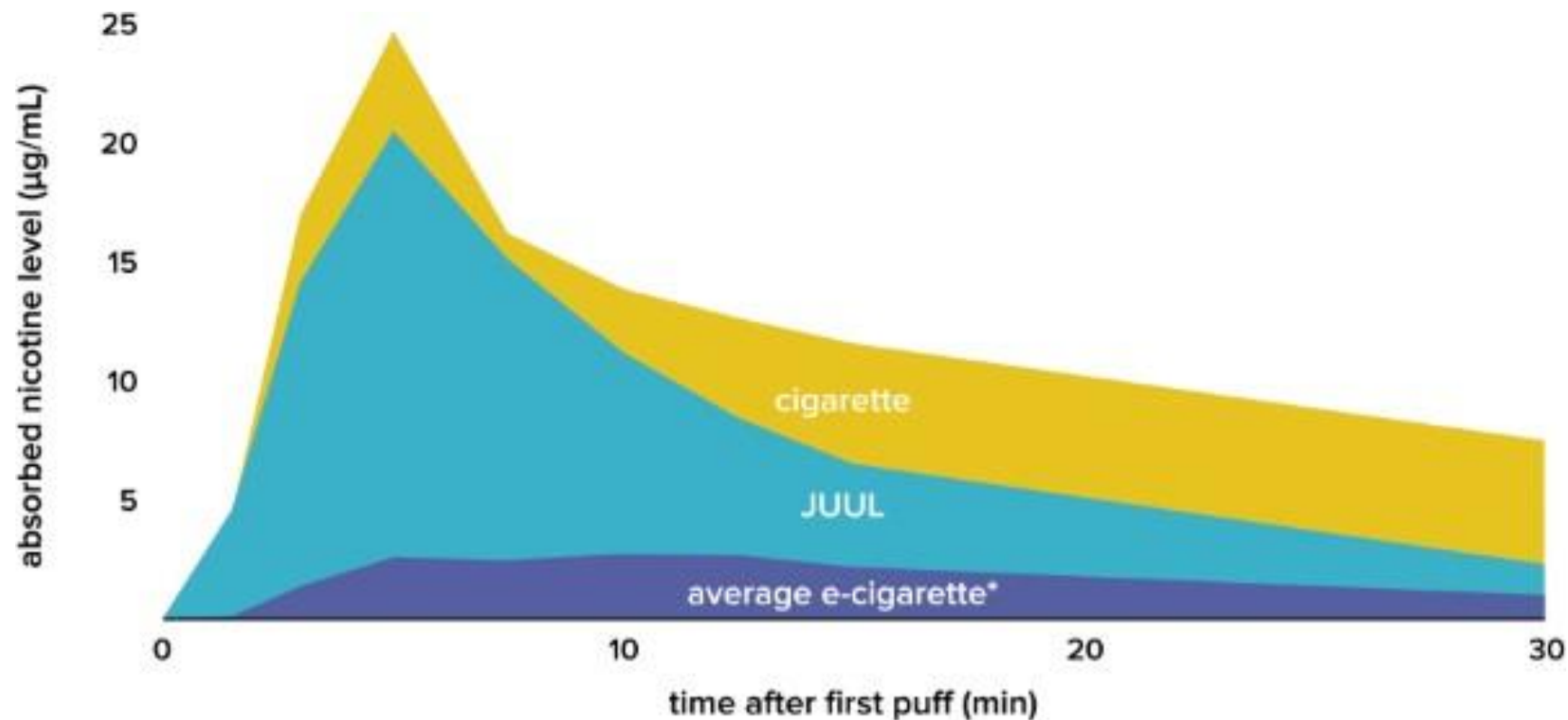
**Nicotine Salts**



**Free-Base  
Nicotine**



# JUUL – Nicotine Delivery



59  
mg/ml







# The vape company Juul said it doesn't target teens. Its early ads tell a different story.

A new analysis of Juul's marketing campaign suggests it targeted youth from its inception.

By Julia Belluz | @juliaoftoronto | julia.belluz@voxmedia.com | Jan 25, 2019, 9:10am EST



This advertisement from San Francisco-based electronic cigarette company JUUL calls back the tobacco advertisements from the mid-20th century. (Stanford Research into the Impact of Tobacco Advertising) Read more: <https://www.smithsonianmag.com/history/electronic-cigarettes-millennial-appeal-ushers-next-generation-nicotine-addicts-180968747/#QyFVdbVwfZPBs6b5.99>



**Source:** [https://www.rih.org/UserFiles/.../Parent%20Vaping%20Presentation%20\(PPT\)](https://www.rih.org/UserFiles/.../Parent%20Vaping%20Presentation%20(PPT)). E-Cigarettes and Vapes What You Need to Know. Charlie Wolff – District Security Coordinator, Retired Lieutenant, NJSP. Former Drug Recognition Expert.

# Advertising



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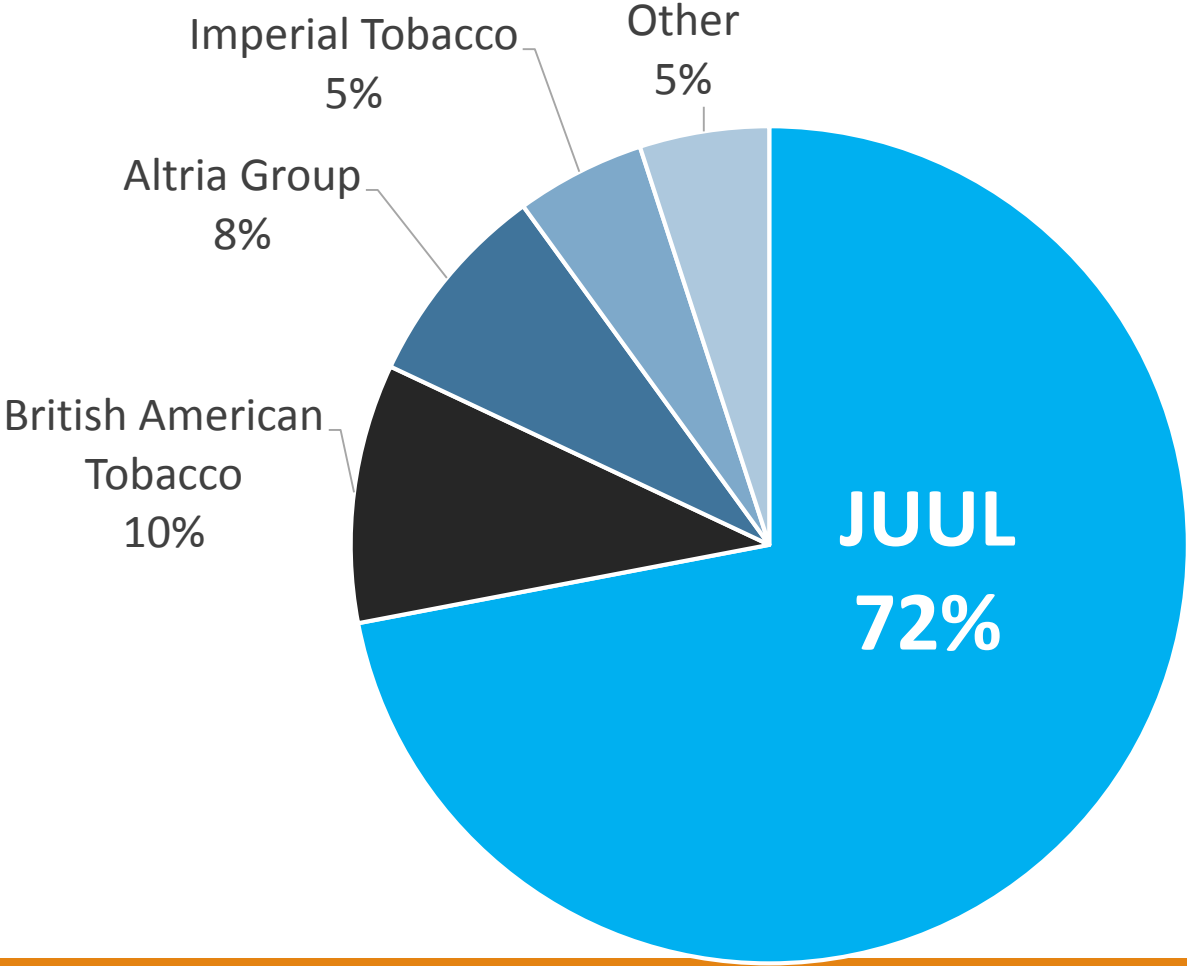
# Flavors



# Youth e-cigarette use

# GROWTH OF JUUL USE

U.S. E-Cigarette Market Share  
Source: Wells-Fargo, Nov 2018





E-CIGARETTES

May 2018



# JUUL & THE GUINEA PIG GENERATION

Public Health Concerns about Use by Young People



JUUL. The recent rapid rise in popularity of this



# Nicotine Addiction

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Nicotine use in early adolescence causes changes in the brain that make **life-long addiction** much more likely for young e-cigarette users.

# Among Youth, E-cigarette Use May Lead to Conventional Cigarette Use

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U.S. adolescents and young adults who had never smoked, but used e-cigarettes at baseline, were **8.3 times more likely to progress to cigarette smoking after 1 year than nonusers** of e-cigarettes

- US Surgeon General Report, 2016





# Public Health Concerns

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Appeal to youth

- Flavorings
- Using social media promotion

Introduction of nicotine

Potential for graduation

Harmful to adolescent brain development

Toxic Exposure to Users

Renormalization of smoking

Delay quitting among smokers

Exposure to secondhand aerosol

Child poisoning from nicotine e-liquid

# Prevention is Critical

“Successful multi-component programs prevent young people from starting to use tobacco in the first place and more than pay for themselves in lives and health care dollars saved”.

Source: US Department of Health and Human Services. 50 Years of Progress: A Report of the Surgeon General, 2014. Available at: <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/50-years-of-progress-bysection.html>.

## LET'S MAKE THE NEXT GENERATION **TOBACCO-FREE**

Your Guide to the 50th Anniversary Surgeon General's Report on Smoking and Health



## SPECIAL ANNOUNCEMENT



## FDA Announces Enforcement Actions and New Youth Tobacco Prevention Plan Related to JUUL and Other E-Cigarettes

Today, FDA Commissioner Scott Gottlieb, M.D., [announced several enforcement actions as part of a new Youth Tobacco Prevention Plan](#) to stop youth use of – and access to – JUUL and other e-cigarettes.

FDA understands that many kids are using e-cigarettes with a particular set of characteristics: an appearance that closely resembles a USB flash drive, high levels of nicotine, and emissions that are hard to see. These characteristics may facilitate youth use by making the products more attractive to children and teens. Several of these products fall under the JUUL brand, but other brands with similar characteristics are emerging.

As part of the Youth Tobacco Prevention Plan to stop youth use of tobacco products – particularly e-cigarettes – the FDA is announcing several new actions and efforts, including:

- Issuing warning letters to 40 retailers for violations related to youth sales of JUUL e-cigarettes;
- Conducting a large-scale, undercover nationwide blitz of retail establishments;
- Sending an official request for information to JUUL Labs requiring the company to submit important documents to better understand the reportedly high rates of youth use and the particular youth appeal of these products; and
- Taking steps to foreclose online sales of JUUL to minors.

As part of the FDA's responsibility to protect kids and significantly reduce tobacco-related disease and death, these are the first steps in a new effort aimed at stopping youth use of e-cigarettes.

# FDA New Proposed Regulations on E-Cigarettes and Flavored Tobacco

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November 15, 2018

- ❑ A ban on the sale of flavored e-cigarettes (with an exception for menthol and mint flavors) in stores that don't have restricted areas that kids under 18 cannot enter.
- ❑ An outright ban on menthol cigarettes and flavored cigars.
- ❑ New age-verification standards for online stores selling e-cigarettes, and plans for redoubled enforcement of any e-cigarette marketing directed toward minors.



# THE FACTS

on e-cigarette use among youth and young adults

Download Surgeon General Advisory

A Message from the Office of the U.S. Surgeon General.

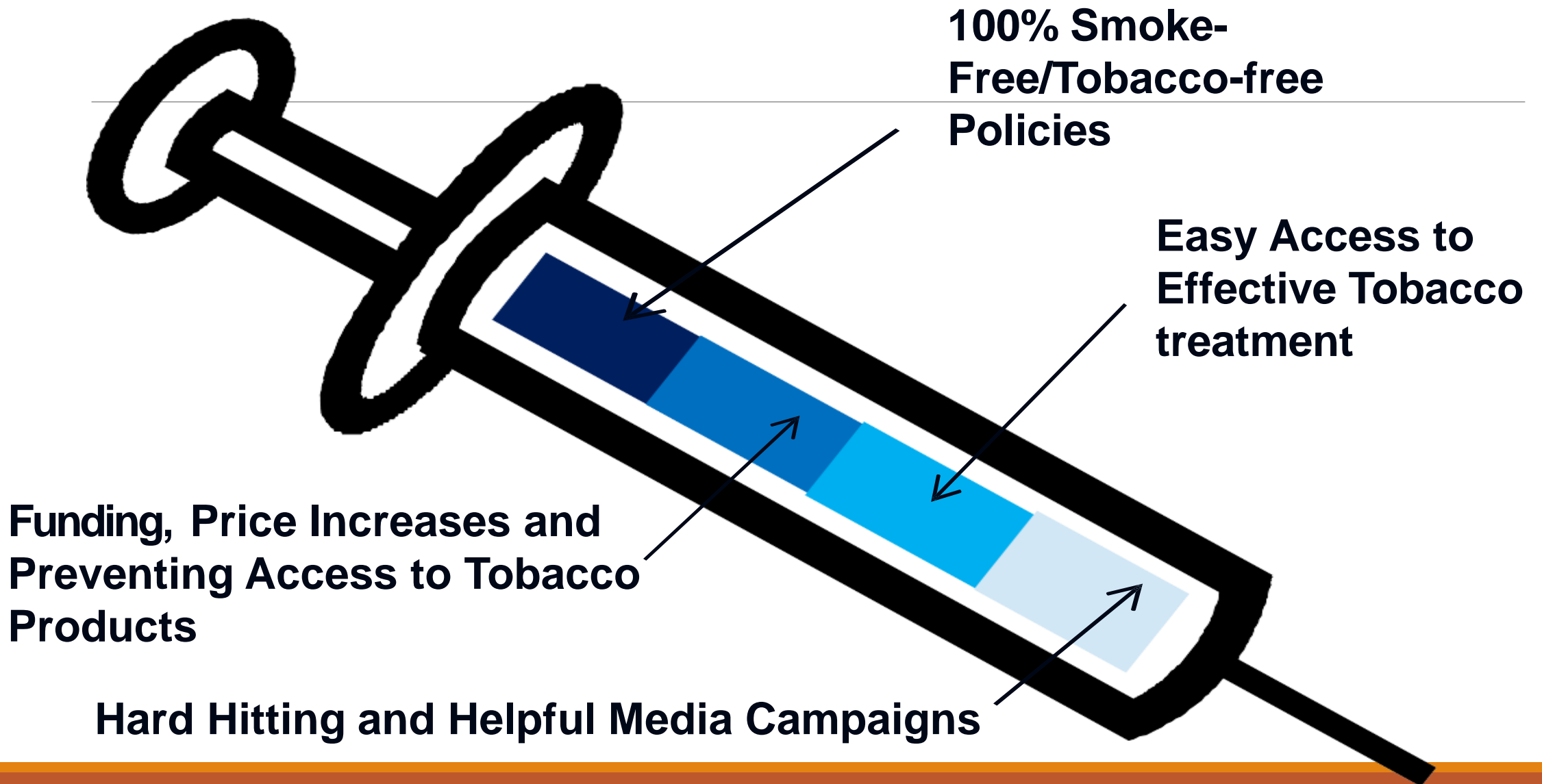
Listen to the Audio PSA

[Audio PSA transcript](#)

Share this page



# Tobacco Control Vaccine



# New Local Policies

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# NCDHHS

## Chronic Disease and Injury Section



- ▼ Tobacco-Free Schools
- Why Tobacco-Free Schools?
- Adopting a Policy
- Policy Communication
- Policy Enforcement
- Tools and Resources
- Research and Facts
- Links
- Contact Us
- Site Map

DHHS > Public Health > CDI > TPCB > N.C. Tobacco Free Schools

CREATE, ADOPT, IMPLEMENT, COMMUNICATE, & ENFORCE  
**100% TOBACCO-FREE POLICY**

### N.C. TOBACCO-FREE SCHOOLS

#### History

A 100 percent Tobacco-Free school has a policy that prohibits the use of tobacco products by anyone, including students, staff, and visitors, on school grounds or at school events at all times. This tobacco-free zone includes school premises, school vehicles, and school events, both indoors and outdoors, and both on and off school property.

In North Carolina, all public schools are 100 percent tobacco-free thanks to seven years of hard work by tobacco control advocates in local communities across the state.

In 2000, the Tobacco Prevention and Control Branch hosted the state's first Teen Summit in Charlotte. One of the main goals that developed from that conference was the need for 100 percent tobacco-free school policies that applied to school staff, parents and visitors – not just students. This means no tobacco use for any person at any time including sporting events and off-campus field trips.

At the time of the summit, only five of 115 NC school systems had such a policy. Work began to increase that number. Since no state law covered the issue at the time, each school board had to be approached individually about developing a tobacco-free policy.

Teens from communities around the state began to approach their local boards of education to request such a policy. They began having success and the number of 100 percent tobacco-free school systems rose steadily from 5 to 14.

In 2001, the North Carolina Health and Wellness Trust Fund (HWTF), was formed from some of the funding received from the

#### Highlights



- [New! Tobacco-Free Schools Signage \(download, print, post\)](#) (PDF, 136 KB)
- [Prohibiting Electronic Cigarettes on School Campuses, 2018](#) (PDF, 504 KB) - **06/01/18**

#### Site Purpose

**Note:** This site documents N.C.'s work on making public schools tobacco free, from 2000 until state law went into effect in 2008, and is provided as a resource for states and communities currently working



# CATCH<sup>®</sup>

## MY BREATH

YOUTH E-CIGARETTE PREVENTION PROGRAM

**Curriculum target age:  
middle & high  
school youth,  
ages 11-18**

### WHO TEACHES THE PROGRAM?

- Teachers
- Tobacco Educators
- Counselors
- Nurses

### WHAT DOES THE PROGRAM INCLUDE?

CATCH My Breath includes active student-centered learning facilitated by peer leaders. The program offers in-class activities, teacher education, online resources, and take-home materials for parents. The program is best practice-based and consists of six lessons at 20 to 30 minutes each.



THE UNIVERSITY OF TEXAS  
~~MD Anderson~~  
Cancer Center  
Making Cancer History®

# ASPIRE

THE ASPIRE TEAM

DEPARTMENT OF BEHAVIORAL SCIENCE



## E-Cigarettes and Vape Pens

[Unit 1 - Where did E-Cigarettes and Vape Pens Come From?](#)

### Table of Contents

- Unit 1 "Where Do E-Cigarettes & Vape Pens Come From?"
- Unit 2 "So, What's Really in these E-Cigarettes & Vape Pens?"
- Unit 3 "What's So Bad About E-Cigarettes & Vape Pens?"
- Unit 4 "Why Do E-Cigarettes & Vape Pens Matter to Young People?"
- Unit 5 "What Can I Do About E-Cigarettes & Vape Pens?"
- Unit 6 "What are JUULS & Other Pod-Based Systems?"

Help Us Improve This Site With This Quick Survey

### Overview

This module provides an understanding of the inner workings of e-cigarettes, the content of the aerosols they produce, and thirdhand smoke. It's broken down into 5 units, each of which explore e-cigarettes in-depth.

*Please note: e-cigarettes, vape pens, etc. may be abbreviated as e-cigs or vapes, and refer to any device similar to an e-cigarette.*

### Goals

- Increase knowledge about basic facts of e-cigarettes and the harm they cause
- Gain awareness of strategies manufacturers and sellers of e-cigarettes employ to increase use among adolescents, such as deceptive and creative marketing strategies
- Gain skills to refuse experimentation and use of e-cigarettes.

Scroll Down to View the E-Cigarette/Vape Pen Crash Course!

### Fact Sheets

Factsheets last updated on 10/02/18 at 10:32am PDT

- [E-Cigarette and Vape Pen Components](#)
- [The Generations of E-Cigarettes and Vape Pens](#)
- [Risks of Electronic Cigarettes: Fast Facts](#)

# *Current QuitlineNC Services based on Availability of Funds*



**1-800-QUIT-NOW**  
1 - 8 0 0 - 7 8 4 - 8 6 6 9

## **Texting**

## **Web only**

## **Commercial Insured**

- One Call

## **Medicare**

- Four calls
- Two weeks starter kit combination therapy

## **Medicaid**

- Four calls
- Two weeks starter kit combination therapy

## **Uninsured**

- Four calls
- Eight weeks of combination therapy

**10 call protocol for pregnant women**

# TRUTH INITIATIVE: New program launched to help curb teen e-cigarette epidemic

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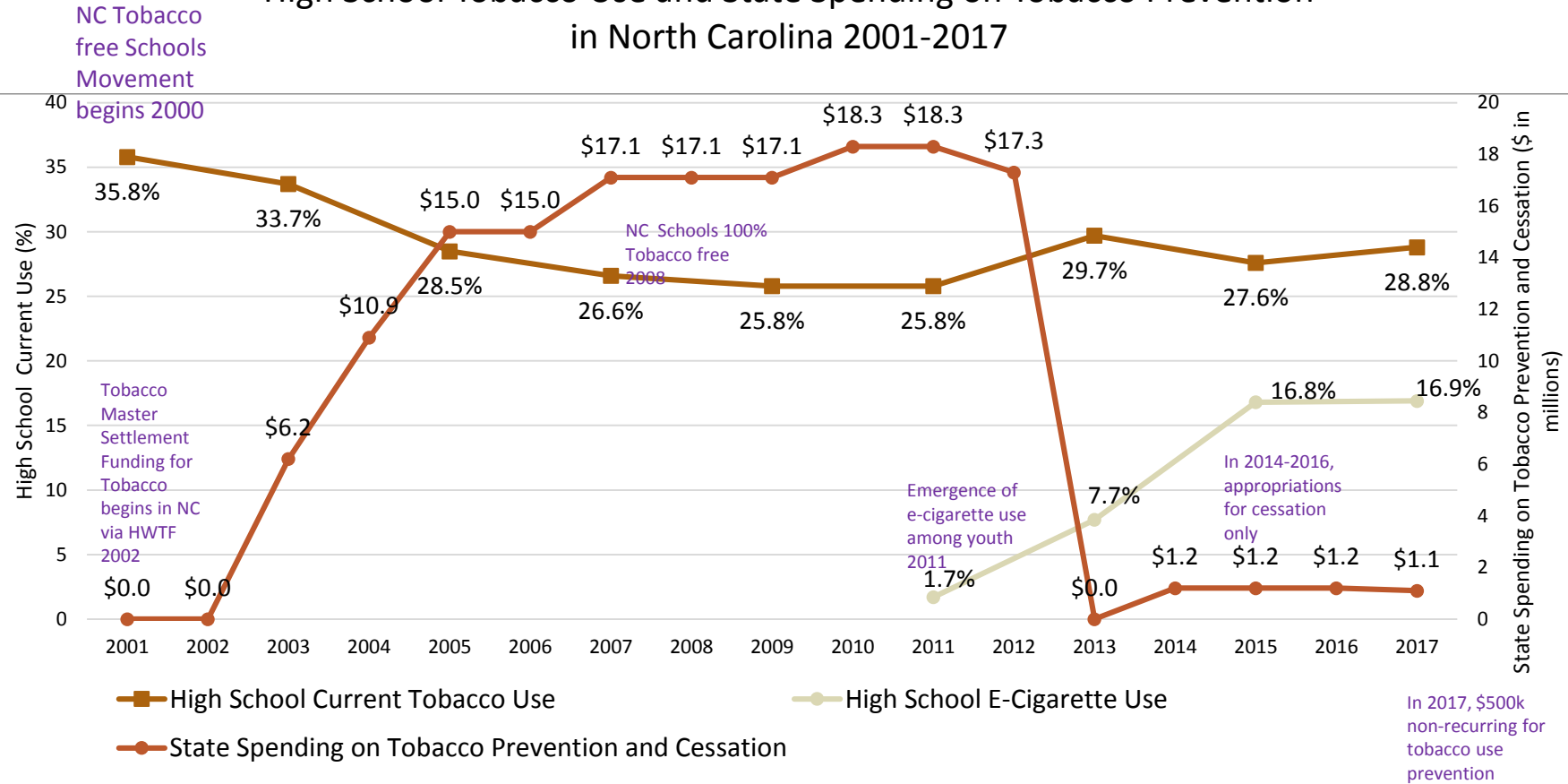
Teen users could get text messages like, "Is it hard to not JUUL in places you're not supposed to, like school? Reply YES or NO."

The program allows anyone to text "QUIT" to 202-804-9884, anonymously and free of charge.

Users are then asked to choose an age bracket so they can start receiving tailored daily text messages of support and tips for quitting.

Truth worked with young people who had either quit or were trying to quit, to make the program's messaging more effective.

## High School Tobacco Use and State Spending on Tobacco Prevention in North Carolina 2001-2017



Since 2001, North Carolina has received an average of **\$149,825,874 per year** from the Tobacco Master Settlement Agreement

# THE FIVE TEEN PEER CROWDS



# DOWN AND DIRTY

A TOBACCO  
PREVENTION  
CAMPAIGN FOR  
“COUNTRY” TEENS





# Tobacco

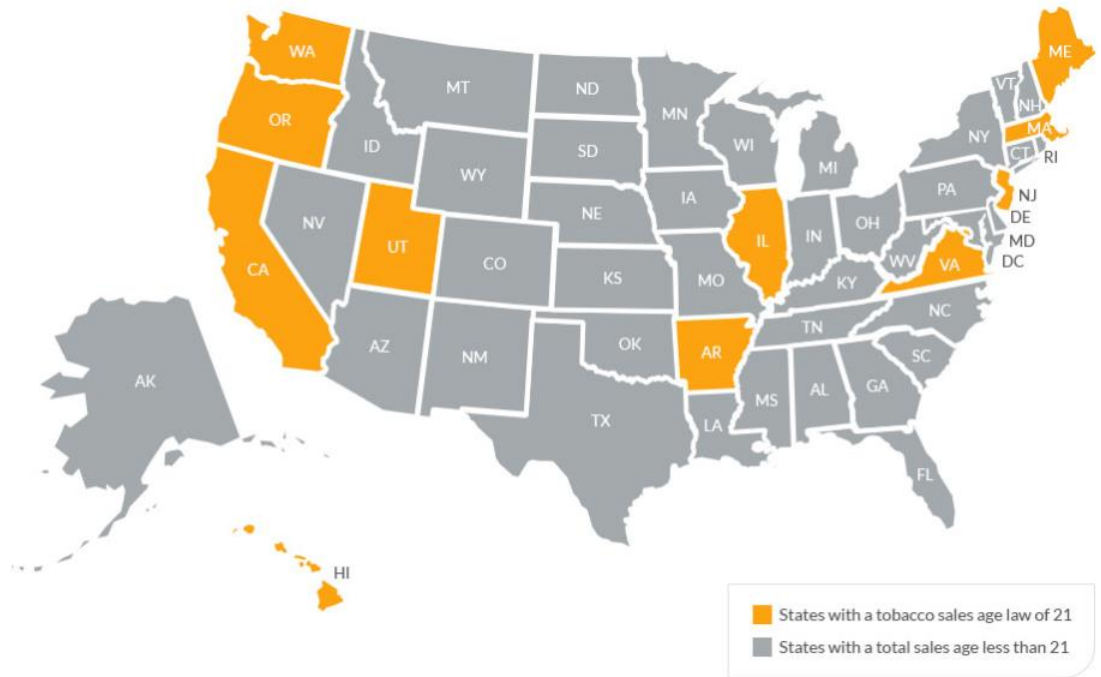
www.lung.org > Our Initiatives > Tobacco > Tobacco Cessation & Prevention

### Our Initiatives

Tobacco

- Oversight & Regulation of Tobacco Products
- Cigarette & Tobacco Taxes
- Tobacco Cessation & Prevention
- Smokefree Environments
- Reports & Resources
- State of Tobacco Control

## Tobacco 21 Laws: Tracking Progress Toward Raising the Minimum Sales Age for All Tobacco Products to 21

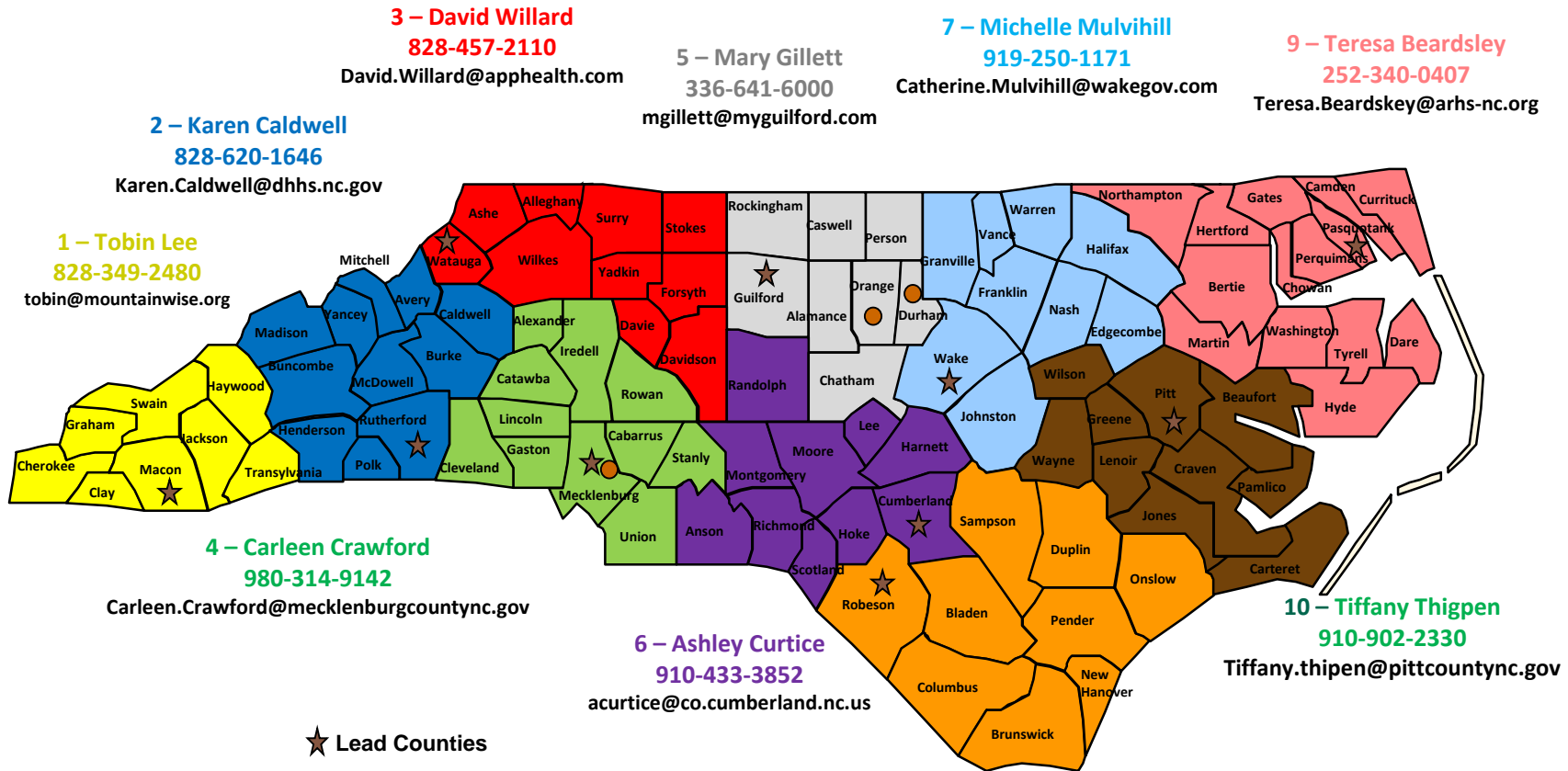


Last Updated: April 8, 2019

Raising the Minimum Sales Age for Tobacco to 21 Will Reduce Youth Tobacco Use and Save Lives

Tobacco use is a serious health hazard, causing or worsening a wide range of adverse health effects, including lung cancer, respiratory infections, and asthma. [Adolescents and young adults](#) are uniquely vulnerable to the effects of [nicotine](#) and nicotine addiction, causing lasting, adverse consequences on brain development.

# Tobacco Prevention and Control Branch (TPCB) Funds Regions 2015-2020



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1. Macon County Public Health
2. Rutherford-Polk-McDowell District Health Department
3. Appalachian District Health Department
4. Mecklenburg County Health Department
5. Guilford County Department of Health and Human Services, Public Health Division

6. Cumberland County Public Health Department
7. Wake County Human Services
8. Robeson County Department of Public Health
9. Albemarle Regional Health Services
10. Pitt County Health Department

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# Questions