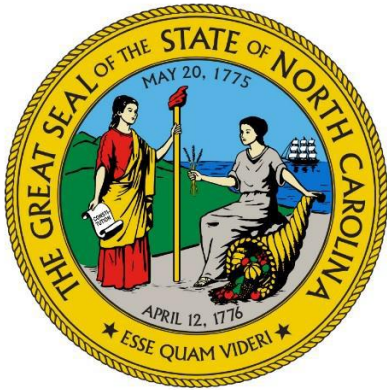


# Tobacco Use Prevention Among Youth and Young Adults

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North Carolina Child Fatality Task Force

Jim D. Martin, MS, Director of Policy and Programs

N.C. Tobacco Prevention and Control

Division of Public Health

September 24, 2018

# The Burden of Tobacco Use in North Carolina

**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

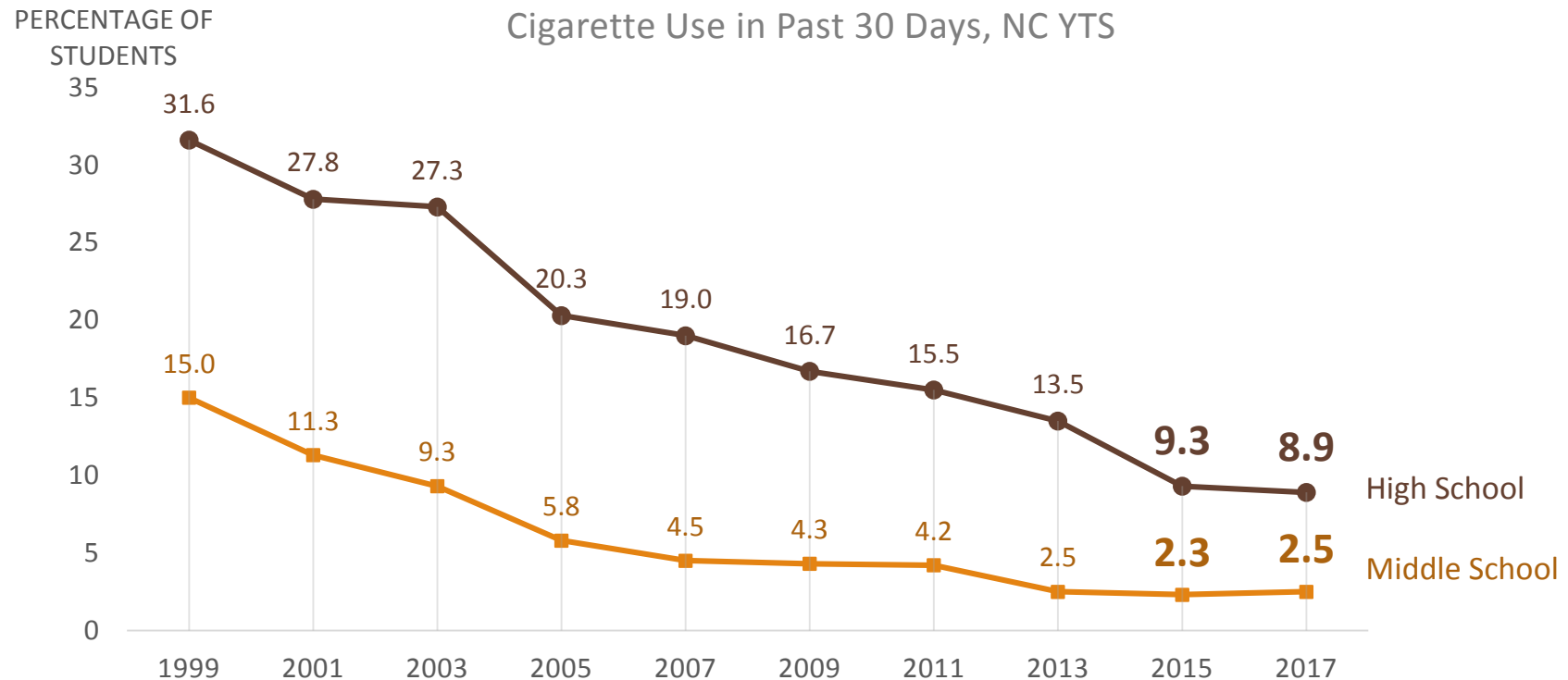
A Report of the Surgeon General



U.S. Department of Health and Human Services

90%  
of tobacco users  
start before the age  
of 18

# Youth Cigarette smoking is decreasing and was largely unchanged from 2015-2017

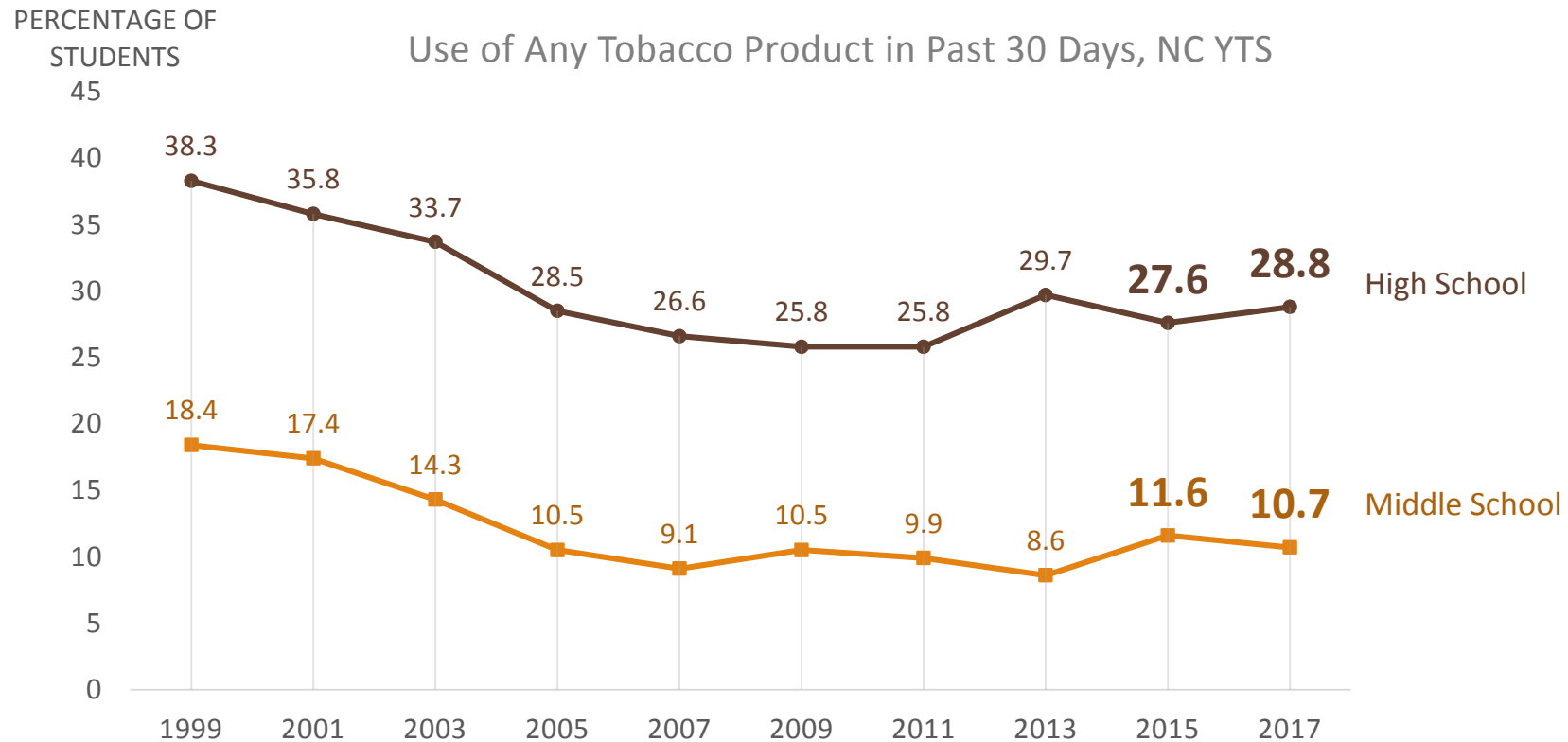




# Changing Landscape of Tobacco Products

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# Overall youth tobacco use was relatively steady from 2015-2017

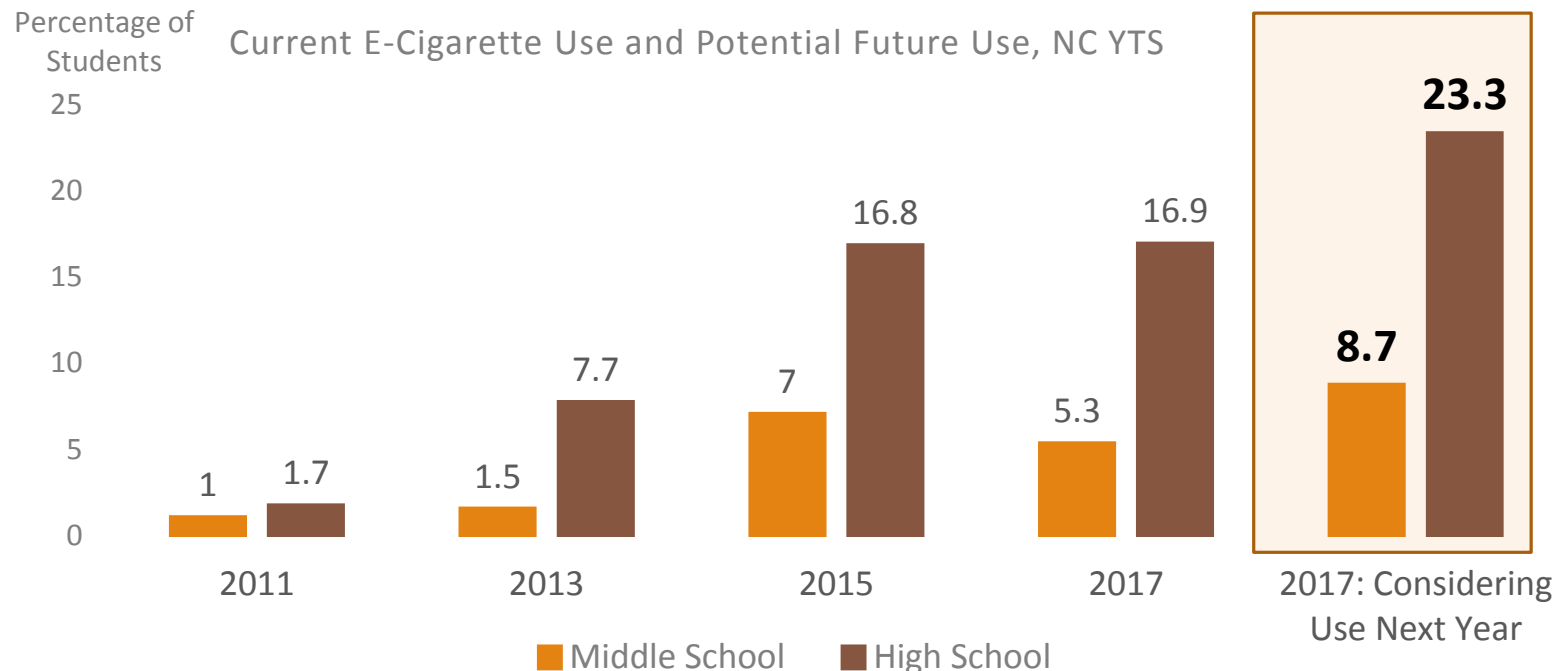


Between 2011-2017 Current Youth Use of E-Cigarettes Increased:

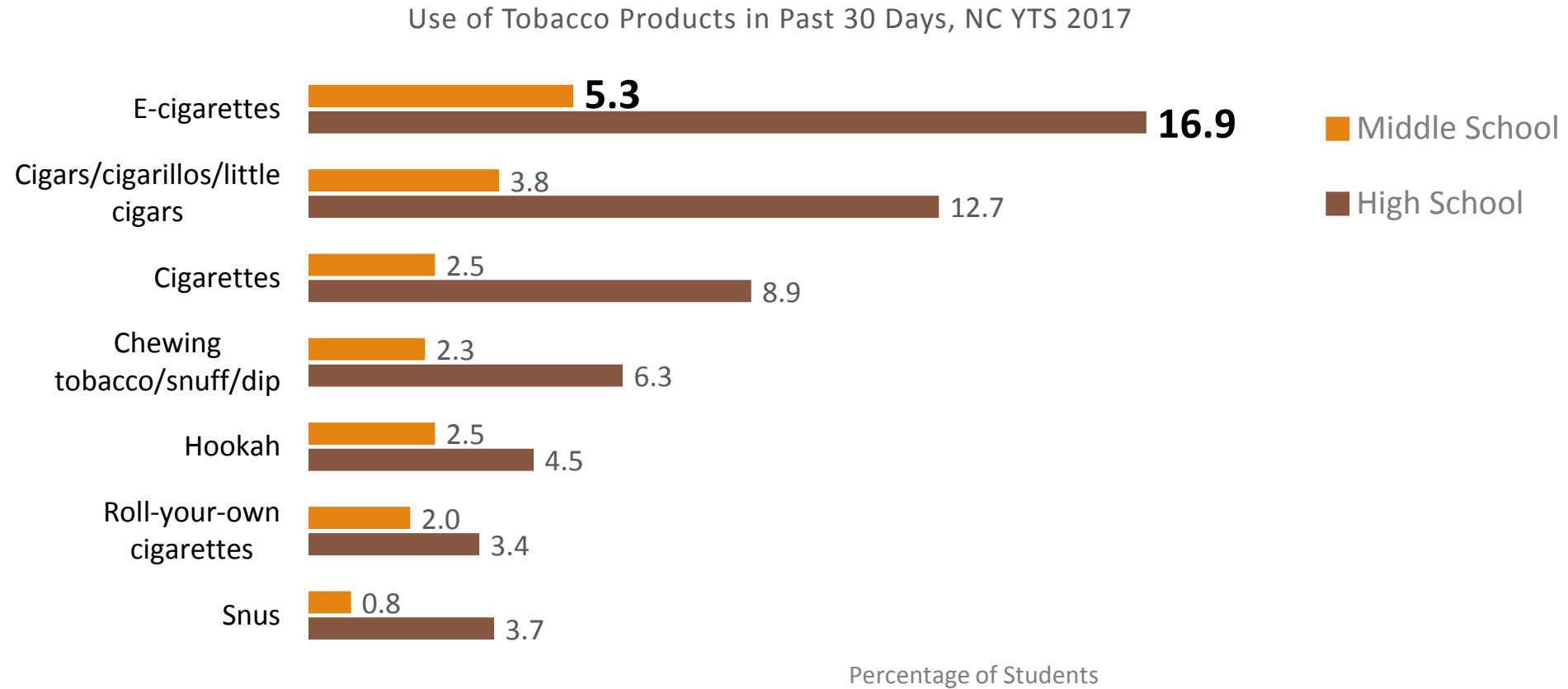
430% ↑  
Middle School

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

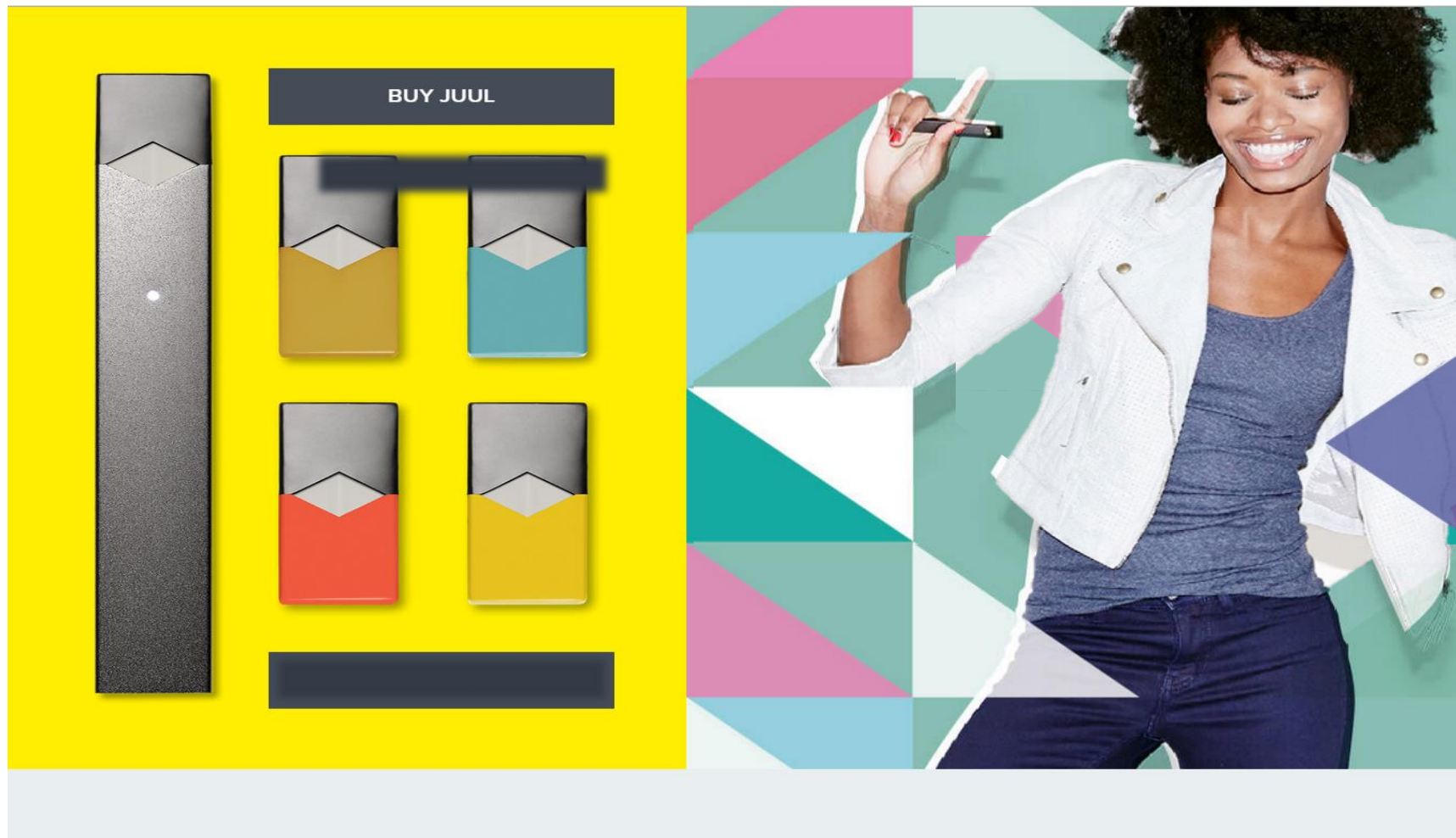




# USB-Shaped E-cigarettes

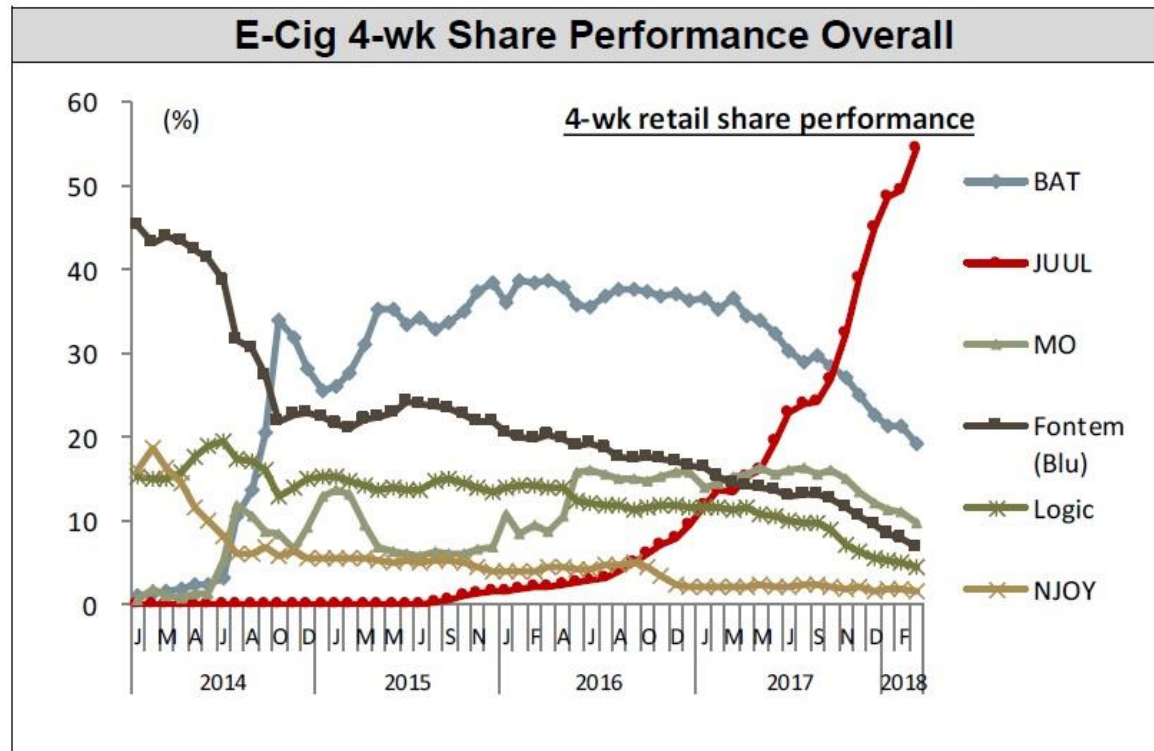
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(Stanford University Research into the Impact of Tobacco Advertising, 2018)

## JUUL and Other E-cigarettes— Market Growth and Concern



- IN MARCH, 2018, JUUL REPRESENTED 54.6% DOLLAR SHARE OF THE E-CIGARETTE TRADITIONAL RETAIL MARKET.
- ON APRIL 24<sup>TH</sup>, THE FDA REQUESTED THAT JUUL LABS, INC. SUBMIT DOCUMENTS RELATING TO MARKETING PRACTICES AND RESEARCH ON MARKETING, EFFECTS OF PRODUCT DESIGN, PUBLIC HEALTH IMPACT, AND ADVERSE EXPERIENCES AND COMPLAINTS RELATED TO JUUL.

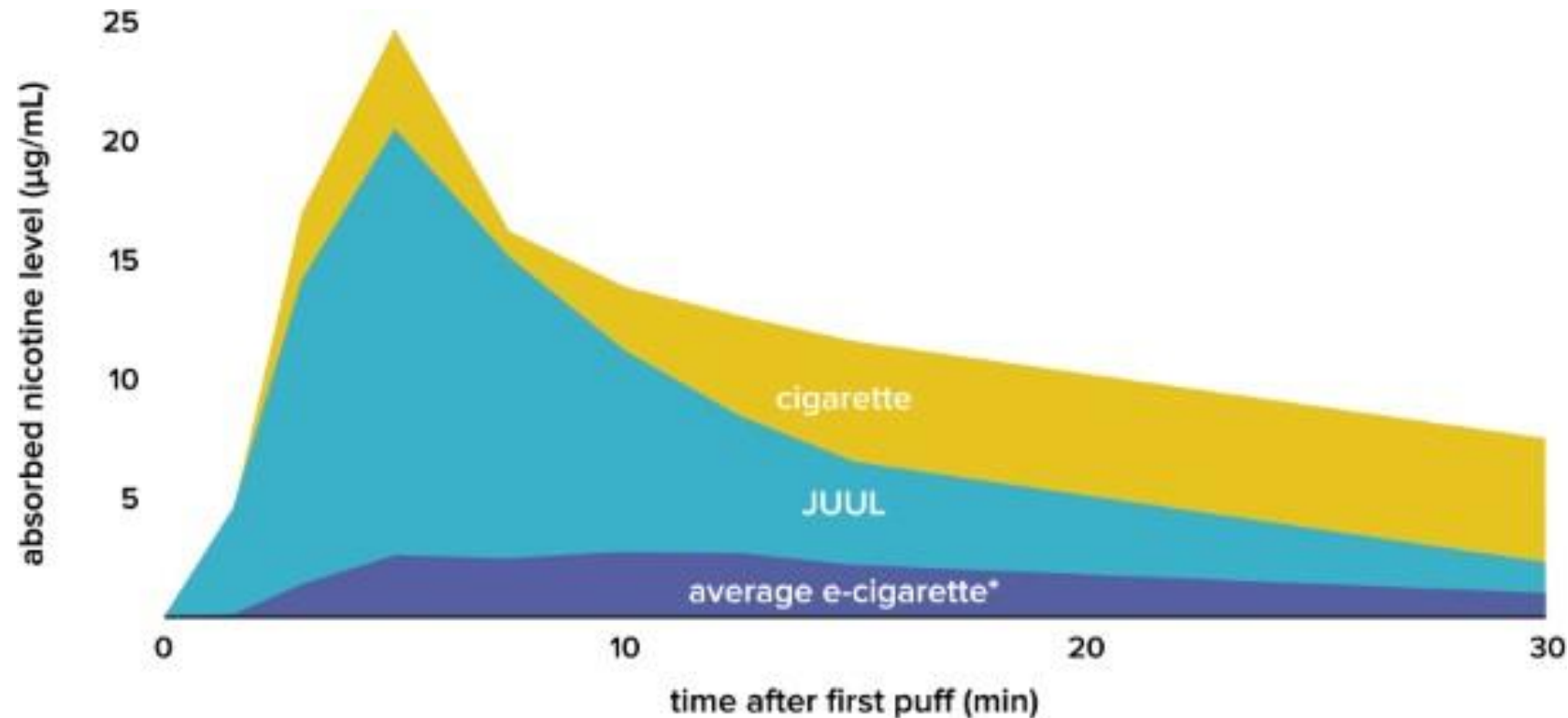
# JUULpods and Flavors

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- The product has 5 flavors in “pods” for the JUUL.
- These pre-filled JUULpods are sold in the following flavors:
  - Fruit Medley, Virginia Tobacco, Cool Mint, or Crème Brulee, and Mango
- Each pre-filled pod is equal to about 1 pack of cigarettes. Some reviews of the product suggest about 200 puffs.
- The JUULpods contain 0.7 ml of e liquid with a very high level of nicotine; **59mg/ml** or **5% nicotine by weight**.



# JUUL – Nicotine Delivery



59 mg/ml

This graph from PAX Labs shows the rate at which nicotine is absorbed and stays in a test subject's blood.  
<http://vapegrl.com/juul-e-cigarette-review/>

# Public Health Concerns

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- The concentration of nicotine in JUUL is more than double the concentration found in other e-cigarettes.
  - This high concentration is a serious concern for youth, who are already uniquely susceptible to **nicotine addiction**.
- The addictive potential is so high that the US Surgeon General has declared that youth use of nicotine in any form is **unsafe**.
- Educators report that youth are using e-cigarettes on our tobacco-free high school campuses

# Nicotine Poses Unique Dangers to the Developing Human

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Nicotine use while adolescent brain is developing can disrupt brain circuit formation

Nicotine is toxic to developing fetuses and impairs fetal brain and lung development

Poisonings occur among users via ingestion of nicotine liquid, absorption through skin, and inhalation



Source: England, Lucinda J et al. Nicotine and the developing human: A neglected element in the electronic cigarette debate. Am Journ Prev Med 2015.



## 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.



Source: US Surgeon General Report, 2016





Good morning Gerri Mattson

Wednesday, April 25, 2018

## JUULing: What Pediatricians and Families Need to Know

### What is a JUUL?

JUUL (pronounced “jewel”) is a brand of e-cigarette made by JUUL Labs Inc.

JUUL has grown quickly in popularity since introduction to the market in 2015, fueled by a serious following among youth and young adults.

JUUL’s popularity among youth raises significant concerns for pediatric health.



### JUUL Characteristics:

JUUL is a sleek, small e-cigarette that resembles a flash drive. Unlike other types of e-cigarettes, JUUL does not look like a traditional cigarette and thus may not be immediately identifiable as a vaping device. Due to their size, JUUL devices are discrete and can be easily concealed in a fist or a pocket.

JUUL operates by heating a “pod” of e-liquid containing nicotine, flavorings and other substances. When heated, the e-liquid creates an aerosol which is inhaled by the user.

JUUL has spawned its own terminology: use of these devices is called “juuling.”

### Public Health Concerns:

**JUUL comes in youth-friendly flavors**, including mango, mint and fruit-medley. For decades, the tobacco industry has used flavors to attract youth to their products.<sup>1</sup> Youth cite flavors as a common reason for e-cigarette use.<sup>2</sup>

**JUUL is highly addictive.** The concentration of nicotine in JUUL is more than double the concentration found in other e-cigarettes. This high concentration is a serious concern for youth, who are already uniquely susceptible to nicotine addiction. The addictive potential is so high that the US Surgeon General has declared that youth use of nicotine in any form is unsafe.<sup>3</sup>

**JUUL users have a significant risk of becoming cigarette smokers.** Youth who use e-cigarettes are more likely to progress to smoking traditional cigarettes.<sup>3,4</sup>

**JUULing is increasingly common in high school and college campuses.** Educators report that youth are using JUUL in classrooms, hallways and restrooms, and are sharing devices with their peers. This social use encourages non-users to try JUUL, and enables students who are too young to purchase these products, or who could not otherwise afford them, to access them through peers.

### References:

# FDA Actions Related to JUUL and Other E- cigarettes

CENTER FOR TOBACCO PRODUCTS

## 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.

## THIS IS A TEST

Can you pick out which are tobacco products and which are innocent kid things? Click to play.



### ICE CREAM ERASER.

This is an eraser. It's exactly this kind of innocence the tobacco industry tries to co-opt.



### NOT A HIGHLIGHTER.

It's a Suorin Drop, a flavored tobacco device that gets past parents and teachers.



### REGULAR SPRINKLES. NBD.

But make no mistake, this is one of the flavors the tobacco industry uses to hook kids.



### NOT HOT SAUCE.

But it can burn. Skin exposure to e-juice like this one can cause seizures and burns.\*



### USB FLASH DRIVES.

These are flash drives. Actual flash drives, not vapes designed to look like flash drives.



### NOT GAME PIECES.

These are Juul pods. Each contains the nicotine of a pack of cigarettes. Available in six flavors.\*



### NOT COOKIES.

It looks like an after school snack, but it's e-juice, often containing toxic traces of nickel and lead.\*



### NOT A SLUSHIE.

It's e-juice. A study found that 75% of tested e-juices use a flavor agent called Diacetyl, known to cause lung disease.\*

Source: California Department of Health, [www.flavorshookkids.org](http://www.flavorshookkids.org)



# 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”.

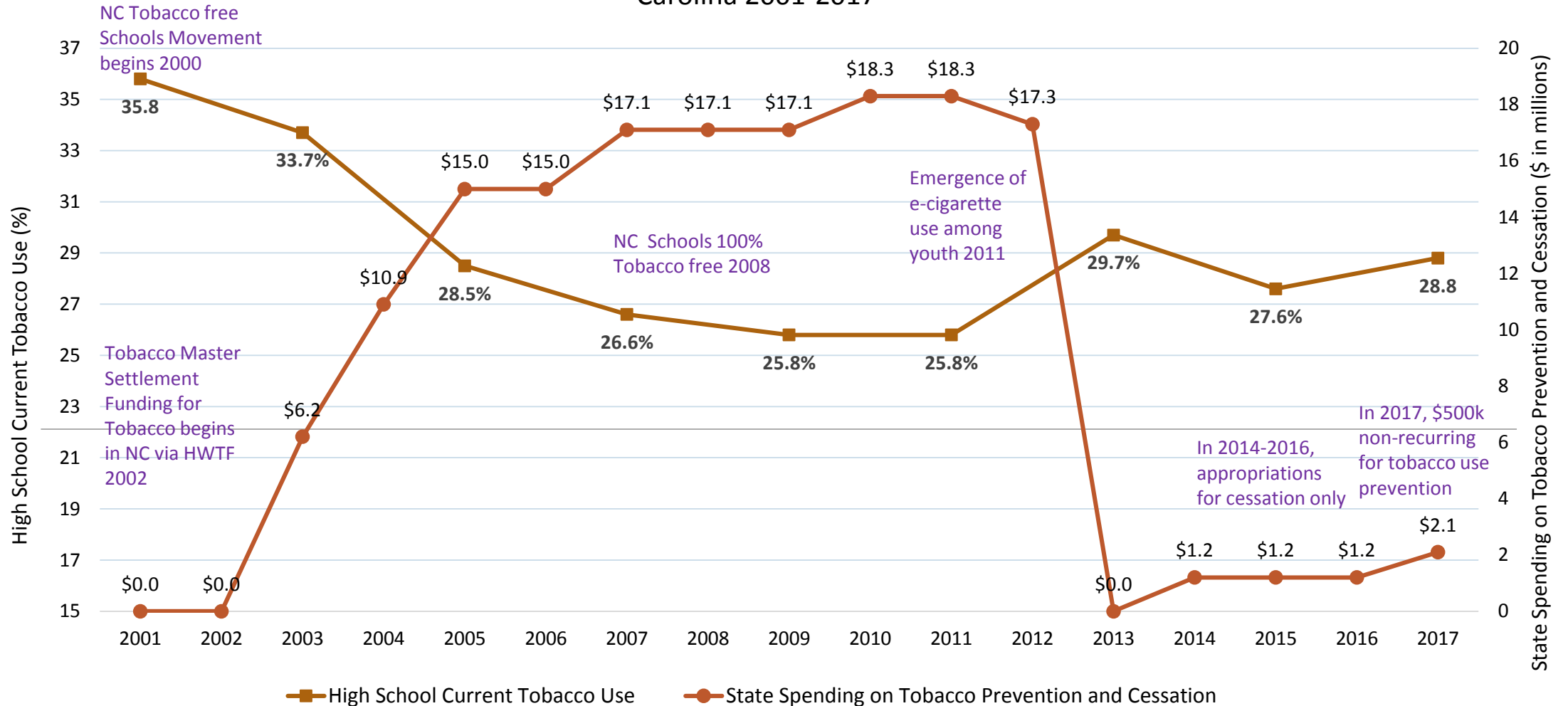
Source: US Department of Health and Human Services. 50 Years of Progress: A Report of the Surgeon General, 2014. Available at: <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/50-years-of-progress-bysection.html>.

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

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



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



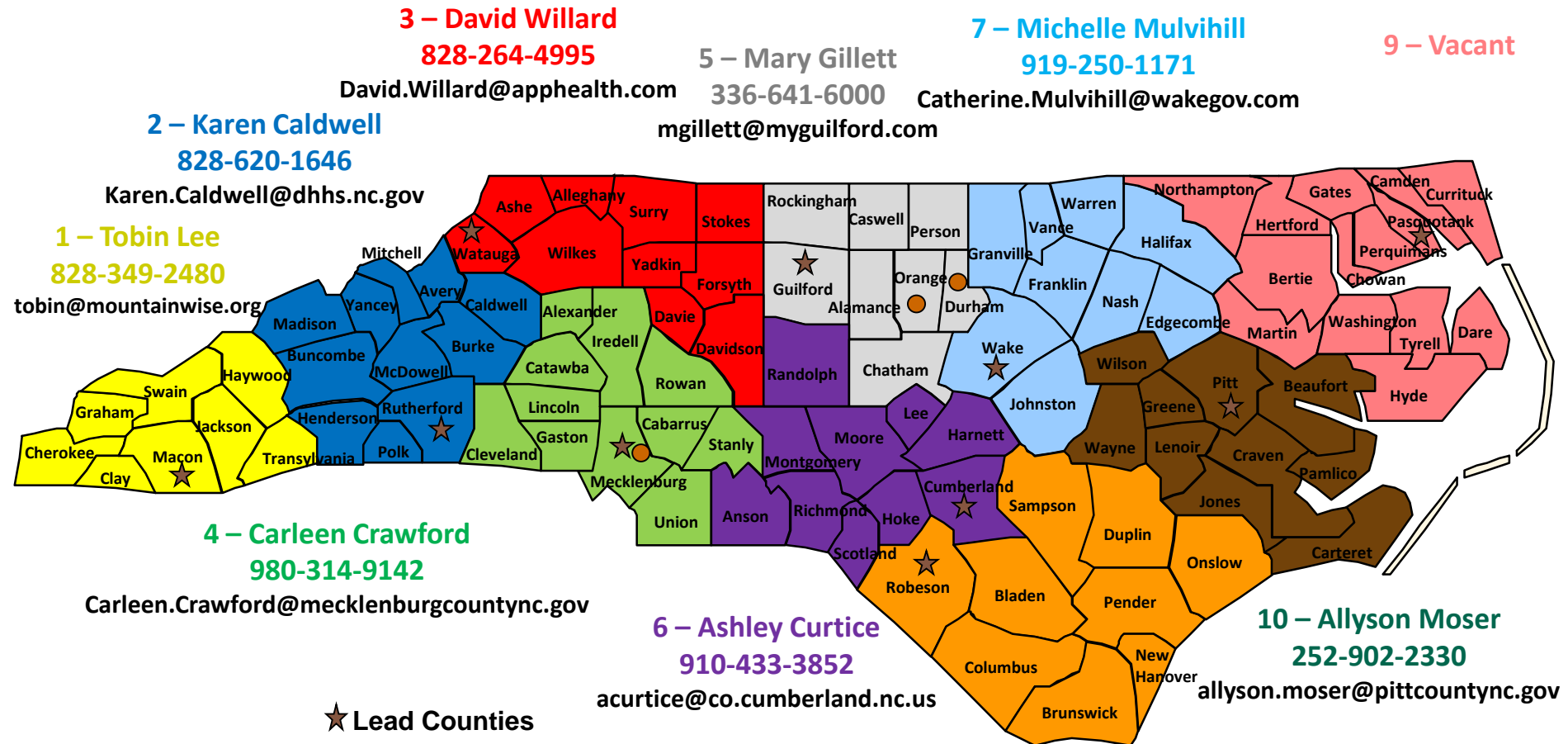
Since 2001, North Carolina has received an average of **\$149,825,874 per year** from the Tobacco Master Settlement Agreement

# Performance Measures 2018-19:

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- Effective tobacco-use prevention messages
- Education of and organizational involvement of adults who influence youth such as parents, teachers, staff and faculty, health and mental health professionals
- Number of smoke-free/tobacco free policies, including e-cigarettes, adopted by local governments, colleges, housing, and workplaces
- Compliance with tobacco-free schools law, tobacco-free child care center rules and tobacco-free college campuses
- Collaborative efforts to reduce youth access to tobacco products
- Collaborative efforts to address tobacco use prevention in schools through the Whole Child, Whole School, Whole Community model

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



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

## Local Tobacco Coordinators

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Orange County Health Department – April Richard, arichard@orangecountync.gov

Mecklenburg County Health Department - Kim Bayha, Kimberly.bayha@mecklenburgcountync.gov

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