

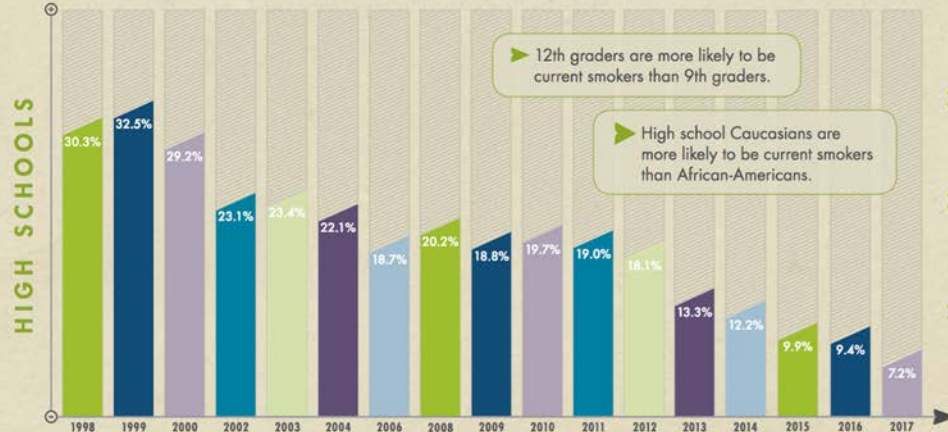
JUUL and Other Emerging Tobacco Products



Emily McClelland, M.S.
December 6, 2018

current cigarette smoking

MISSISSIPPI PUBLIC SCHOOLS



- * In 2017, **9,553 Mississippi public high school students** had smoked cigarettes on at least one of the past 30 days.
- * The prevalence of current smoking has **decreased by 76%** since 1998, leading to 30,649 fewer young smokers.
- * In the past year, the prevalence of current smoking **has not changed significantly**.



- * In 2017, **1,607 Mississippi public middle school students** had smoked cigarettes on at least one of the past 30 days.
- * The prevalence of current smoking has **decreased by 93%** since 1998, leading to 20,468 fewer young smokers.
- * In the past year, the prevalence of current smoking **has changed significantly**.

► Significant Demographic Differences

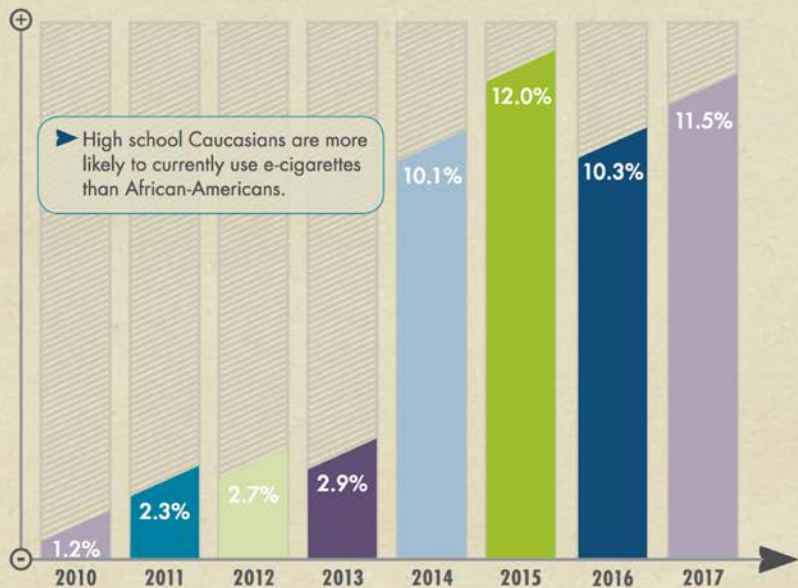
- **7.2% for high school students**

- **1.5% for middle school students**

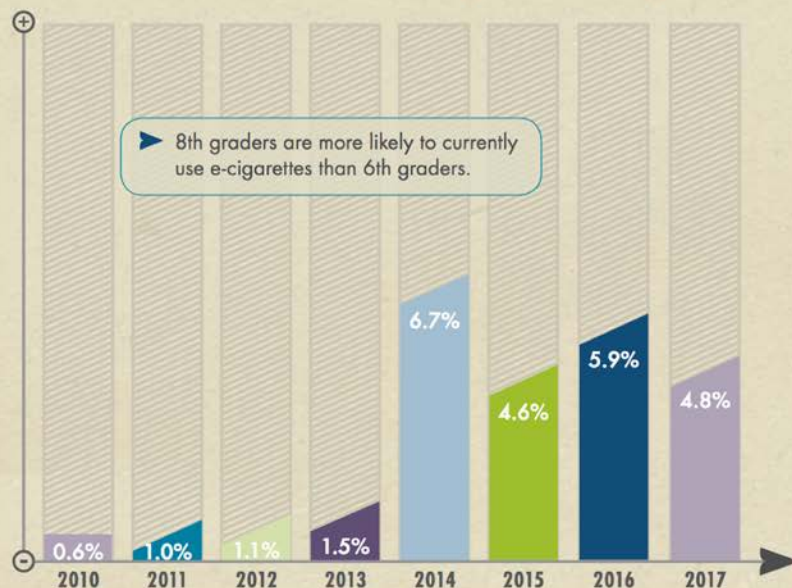
current electronic cigarette use

MISSISSIPPI PUBLIC SCHOOLS

HIGH SCHOOLS {2010-2017}



MIDDLE SCHOOLS {2010-2017}



► Significant Demographic Differences

Preliminary 2018 National Youth Tobacco Survey Findings

- Surge in youth current e-cigarette use
 - 78% increase from 2017 to 2018 for high school students
 - 48% increase from 2017 to 2018 for middle school students
- 20.8% of high school students reported current e-cigarette use
 - Up from 11.7% in 2017
- 4.9% of middle school students reported current e-cigarette use
 - Up from 3.3% in 2017
- 28% of high school current e-cigarette users used on 20+ days
 - Up from 20% in 2017
- 68% of high school current e-cigarette users used flavored e-cigarettes
 - Up from 61% in 2017

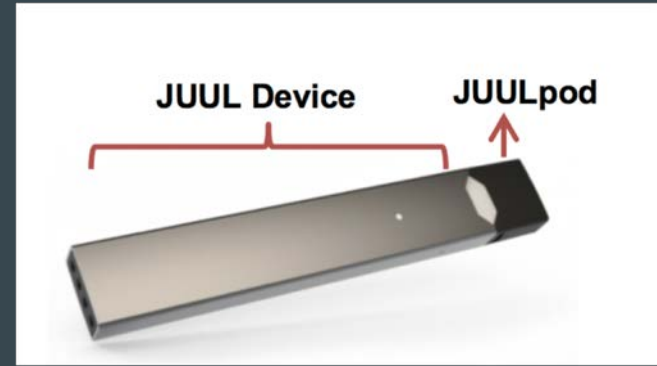
JUUL use among Mississippi College Students

- 69.5% of students were aware of JUUL
- 59.4% of students were aware each pod contains as much nicotine as a pack of cigarettes
- 37.1% of students had tried JUUL
- 76.1% reported past 30 day use of JUUL
- 9.9% of students who reported JUUL trial did not report e-cigarette trial



What is JUUL?

- Introduced in 2015
- Each pod contains 59 mg/ml of nicotine
 - Equivalent to a pack of cigarettes (~200 puffs)
- Mimics a cigarette's ability to rapidly deliver nicotine to the brain
- Nicotine delivery system is very efficient and nicotine levels are high
 - Increases risk of addiction among novice nicotine users
- First e-cigarettes that are easy to use, maintain, and provide high levels of nicotine
- iPhone of e-cigarettes
- Early research indicates youth who were not previously at risk for initiating cigarette smoking are initiating nicotine use with Juul e-cigarettes
- E-cigarette use increases risk of using combustible tobacco cigarettes



JUUL

- Pods are not refillable
 - Contain a concentrated juice cocktail of salts and organic acids found in tobacco leaves
- Available in 8 flavors
 - Mango, Cool Mint, Virginia Tobacco, Cool Cucumber, Classic Menthol, Fruit Medley, Creme Brulee, Classic Tobacco
- JUUL starter pack costs \$49.99 and a 4 pack of pods costs \$15.99
 - Starter pack: JUUL device, USB charger, 4 JUULpods (Virginia Tobacco, Mint, Mango, Creme)
- Requires little maintenance
- ALL JUUL PODS CONTAIN NICOTINE

Stealth Vaping




- Small, discreet, and easily confused for flash drives
- Aerosol emission is minimal compared to other e-cigarettes
 - Easier for users to hide use in classrooms and other indoor places
- Higher levels of propylene glycol gives hit to throat like a cigarette
 - Results in less vapor cloud than other e-cigarettes
- YouTube videos and other websites teach kids how to conceal and stealth vape
 - Vape apparel
 - <https://vaprwear.com>
- To use a JUUL has become a verb - JUULing
 - Common on social media
- Depending on frequency and amount of usage ~ established smoker

JUUL Sales

- Best selling and fastest growing e-cigarette on the market
 - 75% of the market share of the total e-cigarette category (Nielsen)
 - Last 4 week period ending October 6, 2018
 - Sales exploded 728% year-over-year
- Over one million JUUL systems sold to date
- Available directly from JUUL Labs, Inc., other online retailers, and at 12,000 convenience stores in the U.S.
- More prevalent in affluent areas due to discretionary income
 - However, JUUL coupons and discounts seen at convenience stores in rural areas
- Online purchases for 21+

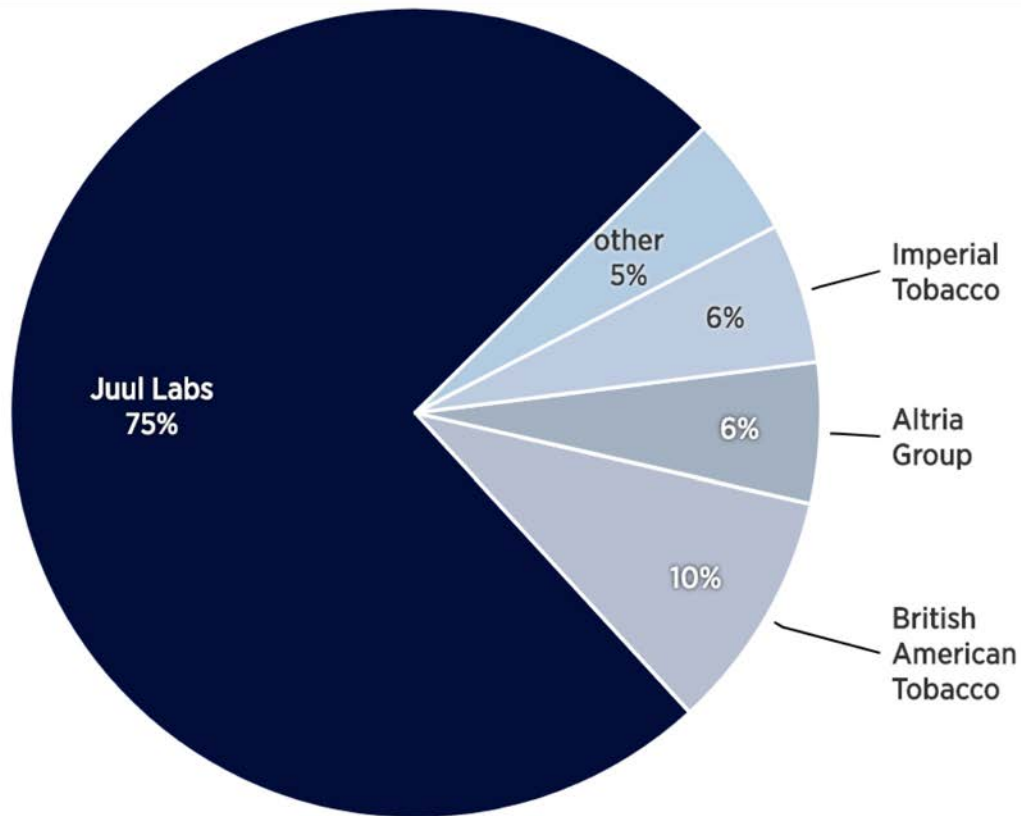
December 2017

E-cigarette market share

| Company  | Market share, last 4 weeks |  YoY growth for 52 weeks  |
|---|----------------------------|---|
| Juul Labs | 32.9% | 699.0% |
| BAT | 27.4% | 22.3% |
| Altria | 15.2% | 72.2% |
| Imperial Tobacco | 11.4% | 1.5% |
| Logic (Japan Tobacco) | 7.2% | 13.9% |

Nielsen / Wells Fargo

October 2018



Source: [Wells Fargo](#)



Resources

- Stanford Medicine Tobacco Prevention Toolkit
 - <http://med.stanford.edu/tobaccopreventiontoolkit/E-Cigs/ECigUnit6.html>
- Vox video on JUUL: How JUUL made nicotine go viral
 - https://www.youtube.com/watch?time_continue=46&v=AF0poKBUyok
- JUULERS against JUUL
 - https://www.youtube.com/watch?time_continue=384&v=7EsNG7RcStQ
- The New York Times - The Price of Cool: A teenager, a Juul, and nicotine addiction
 - <https://www.nytimes.com/2018/11/16/health/vaping-juul-teens-addiction-nicotine.html>

FDA and JUUL

- Revisit compliance policy as it applies to ENDS products that are flavored, including all flavors other than tobacco, mint, and menthol
- All flavored ENDS products sold in age-restricted, in-person locations, and if sold online, under heightened practices for age verification
- Advance a proposed ruling seeking to ban menthol in combustible tobacco products, including cigarettes and cigars
- Propose a policy to ban flavors in cigars
- No proposed timeframe for these changes

<https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm625884.htm>

JUUL Changes

- Shut down social media accounts
 - Facebook and Instagram
- Stop selling nicotine liquids with flavors at bricks and mortar stores
 - Mango, fruit medley, creme brulee, cucumber
- Will continue to sell all its products on its website
- New device
 - Less nicotine, more intense vapor - enhance rate at which nicotine is absorbed by the body
 - Lower nicotine version with 3% nicotine or 23 mg/ml of nicotine is already available in the US
 - Only in Mint and Virginia Tobacco flavors

<https://www.nytimes.com/2018/11/27/health/juul-ecigarettes-nicotine.html>

Other Stealth Vaping Products

- PHIX
 - Pods are not refillable
 - Each PHIX pod contains 1.5mL with 5% nicotine by weight
 - Equivalent to 2 packs of cigarettes or 400 puffs
 - Like JUUL, ALL PHIX PODS CONTAIN NICOTINE
 - Flavors: Original Tobacco, Hard Strawberry, Spearmint, Butterscotch Tobacco, Ice Tobacco
 - Also, Infusion Cool Melon, Blue Raspberry, and Cool Grape
 - Bundle kit: Phix battery and charger, Mixed pack of 4 pods = \$35.00
 - 4 pack replacement of pods = \$19.99
- Many other brands of similar pod based devices



IQOS - Philip Morris International

- IQOS = I Quit Ordinary Smoking
- Heat not burn product
- Heats the tobacco just enough to release a nicotine containing tobacco vapor without burning the tobacco
- Available in two versions
 - First - 3 main components: heated tobacco unit (HEETS or HeatSticks), an IQOS holder, and charger (must be recharged after each use)
 - Second - integrated that combines the holder and charger and allows multiple uses without charging the battery (recharged after 10 consecutive uses)
- Consumer pushes a button to turn on the heater
- Once finished, the HEETS or HeatSticks are removed from the holder and thrown away

IQOS

- Different from e-cigarettes
 - Use real tobacco not flavored liquid nicotine
- Concept
 - Allow users to experience something that looks and feels like smoking without inhaling combustible tobacco
- Little research available on the health effects of using or being exposed to heat not burn products
- Not currently available in the US
- Concerns
 - Another addiction pathway
 - Promote use of more than one tobacco product at a time
 - An attempt to renormalize smoking



<https://truthinitiative.org/news/what-are-heat-not-burn-cigarettes>

Where is *IQOS* available?



For More Information

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