

# Highlights from the Tobacco Presidential Advisory



# Background

Nearly 90% of US smokers first try a tobacco product by age 18 years old. **Experimentation** with combustible cigarettes by adolescents, even on an infrequent basis, is associated with an established smoking habit as an adult



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- This paper describes:
  - changing patterns of tobacco use in the US
  - latest science on e-cigarettes and other new and emerging tobacco products
  - disturbing rise in use and access of these new modalities of nicotine delivery to youth and other vulnerable populations
  - population health implications of tobacco regulation and control, prevention efforts, provider and patient education, and comprehensive cessation therapies
  - the position of the American Heart Association (AHA) toward achieving an ultimate end to tobacco and nicotine addiction in the US
  - The importance of maintaining our long-standing evidence-based tobacco prevention and control strategies that have significantly reduced tobacco use and initiation in the US



# Current Tobacco (e-cig) Use

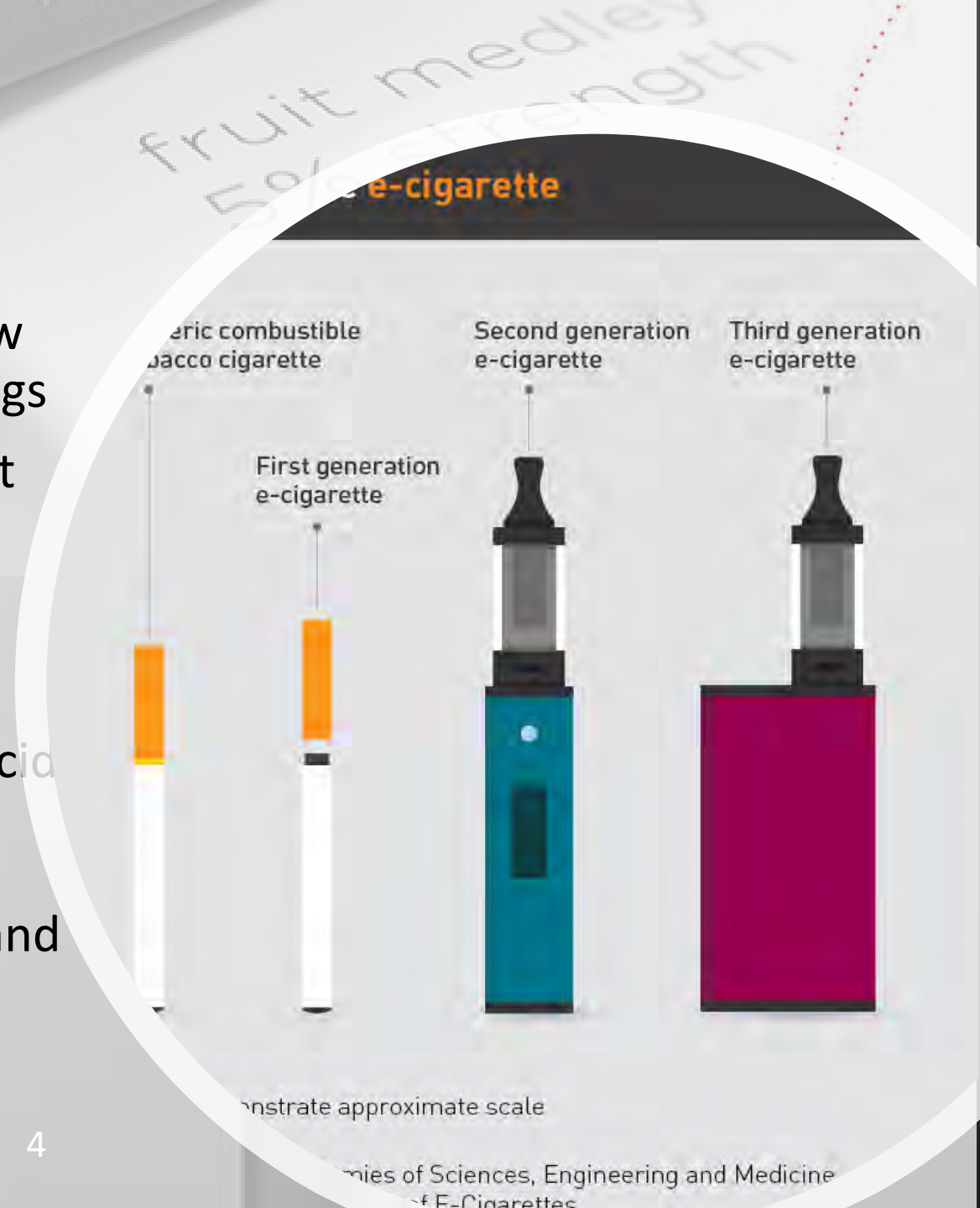
- During 2017–2018 alone, e-cigarette use rose by 78% in high school students and 48% in middle school students.
- E-cigarettes have now become the most popular tobacco product among adolescents in the United States.
  - Can be used for “smoke tricks” like smoke rings and for inhaling other substances like marijuana
  - Others tobacco products: cigars, cigarettes, smokeless tobacco, hookah, pipe tobacco, bidis





# Newer Products

- **E-Cigs, E-hookah, E-cigars** may become a new way for nicotine addiction or recreational drugs
- MAY have benefit in helping smokers quit, but long term effects are unclear and widely debated
- **JUUL products:** contain as much nicotine as a pack of 20 regular cigarettes.
- The nicotine in JUUL is present as a benzoic acid salt rather than a free base. This formulation increases the rate of nicotine delivery and decreases the harsh sensation in the mouth and throat
- Less stigma than cigarettes



# Health Impact

- Because products contain nicotine, they are addictive
- The use of any tobacco product including e-cigarettes, hookah, non-cigarette combustible tobacco or smokeless tobacco has adverse effect on biological systems, although each product may differ in the extent of exposure to harmful and potentially harmful constituents
  - The National Academy of Medicine review committee suggested that e-cigarettes are not without adverse biological effects in humans, but they are **likely to pose less risk than continuing to smoke cigarettes.**
  - While e-cigarettes might cause **youth who use them to transition to combustible tobacco** products, they **might also increase adult cessation** of combustible cigarettes



# Health Impact Contd'

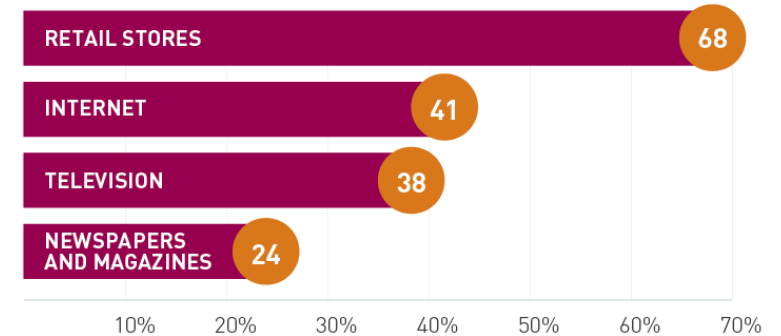
- Studies have found that e-cig vapor associated with
  - initiation of cigarette smoking
  - lower expression of immune related genes
  - myocardial infarction (could not establish a causal relationship)



# Marketing Practices

- A 2014 study showed that almost 70% of middle and high school students were exposed to e-cigarette advertisements in retail stores, on the Internet, television, movies, newspapers, and magazines.<sup>19</sup>
- JUUL is a rapidly growing type of e-cigarette that became available in the US in 2015. The device is particularly appealing to adolescents and young adults because:
  - slim design shaped like a USB flash drive (which makes it easier to hide)
  - comes in different colors
  - can be consumed in different, palatable flavors
  - it does not emit large smoke clouds, making it optimal for discrete use
  - There are many other pod devices now on the market
- E-cigarette marketing appears to be increasingly targeting and influencing Blacks, with particular exposure from radio and television

Where young people are most likely to see e-cigarette ads



<https://truthinitiative.org/news/e-cigarettes-facts-stats-and-regulations>





# Health Inequities

- Tobacco use in general is higher among:
  - People in rural areas (esp in south Atlantic region)
  - People with mental health conditions
  - People with lower SES
  - People who identify as LGBTQ
  - Higher tobacco outlet density in urban areas
- E-cigarette use is higher among:
  - Folks who have ever smoked conventional cigarettes
  - individuals above 200% of the Federal Poverty Level
  - US citizens
  - those who spoke English-only at home
- Black people:
  - Less likely to report ever using e-cigarettes
  - More likely to use e-cigs as a cessation aid
- Caucasians, Native Hawaiians and Filipinos have reported more perceived improved health due to e-cigarette use



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# Role of Cessation

- There is limited evidence that e-cigarettes may help smokers quit using combustible tobacco because
  - small number of clinical trials conducted to date
  - results of longitudinal observational studies are mixed
- Preliminary research has shown some beneficial effects of short-term switching to e-cigarettes, including reduced smoke toxicant exposure and cigarette dependence and increased motivation to quit
- Non-combustible products with higher nicotine levels lead to a more significant reduction in tobacco cravings than those with lower nicotine levels.
- **More research is needed to understand the efficacy of e-cigarettes in promoting quitting relative to other FDA approved cessation therapies**



# Noteworthy

- Noting this unprecedented spike in e-cigarette use, in December 2018, the US Surgeon General issued an advisory for parents, teachers and health professionals about the negative health consequences of e-cigarettes.
- Recent evidence also indicates that youth are using multiple devices, including the JUUL and that querying about use of specific e-cigarette devices may be needed to get accurate assessment of e-cigarette use rates among youth in national surveillance.<sup>22</sup>
- There is a need for continued research on impact of e-cig use on cardiovascular disease





# Implications for Health Practitioners

- Health care providers should receive adequate professional development about
  - How products are regulated
  - How products are used
  - How young people are accessing and initiating use
  - Potential health impacts
  - Role of these products in switching and cessation
- Specific guidance in the AHA statements on e-cig and hookah
- In a clinical setting providers should:
  - Screen for all tobacco use
  - Encourage consideration of established pharmacological and behavioral smoking cessation therapies
  - Counsel young people to avoid or quit use of all tobacco products



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# Implications for Health Practitioners

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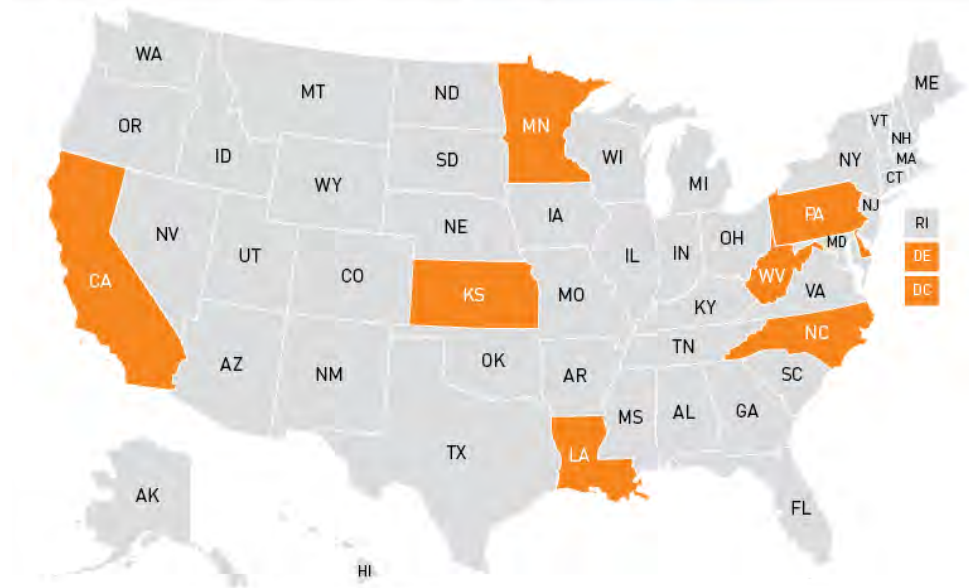
- Not enough evidence yet for clinicians to counsel their patients using combustible tobacco products to use e-cigarettes as a primary cessation aid. However, should a patient fail initial treatment, be unable or unwilling to use conventional smoking cessation medications, and wish to use e-cigarettes to aid quitting, it may be reasonable to support the attempt with the following caveats:
  - E-cigarettes have adverse effects on the cardiovascular system and overall health even though they may be less toxic than cigarettes
  - Do not use e-cigarettes indefinitely
  - Use of e-cigarettes should not endanger abstinence from combustible tobacco products
  - Quit smoking cigarettes as early as possible



# Policy Implications

- Need to include e-cigarettes in comprehensive smoke-free laws
- Role of FDA:
  - Regulating nicotine
  - Illicit market
  - Flavorings
  - Marketing/Advertising
  - Warning labels
- Global Coordination

Eight states and Washington, D.C., have imposed a **tax on e-cigarettes**.



<https://truthinitiative.org/news/e-cigarettes-facts-stats-and-regulations>

# AHA Position

- AHA wants to assure equitable, effective regulation for tobacco prevention and control to achieve a tobacco endgame for the entire population of the US
  - Robust regulation of newer tobacco products
  - Independent research to evaluate the impact of long-term use of new products and dual use
  - FDA must assess the quality and strength of evidence of new products
  - Broad policy dialogue for policy development, implementation, and enforcement, with surveillance and monitoring
  - Special focus on vulnerable populations
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- **CTA: There is urgent need for robust Food and Drug Administration (FDA) regulation of all tobacco products to avoid the significant economic and population health consequences of continued tobacco use.**