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.

- 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.19

• 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
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
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.22

• 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
Implications for Health Practitioners (Contd’)

- 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

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

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.