



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF HEALTH AND HUMAN SERVICES
LANSING

ROBERT GORDON
DIRECTOR

TESTIMONY OF

Joneigh S. Khaldun, MD, MPH, FACEP
Chief Medical Executive, State of Michigan
Chief Deputy Director for Health, Michigan Department of Health and Human Services

HEARING ON

“Sounding the Alarm: The Public Health Threats of E-Cigarettes.”

Subcommittee on Oversight and Investigations
Committee on Energy and Commerce
United States House of Representatives
September 25, 2019

Chair DeGette, Ranking Member Guthrie, and members of the Subcommittee, thank you for the opportunity to speak with you today regarding the public health crisis of youth e-cigarette use.

Earlier this month, Michigan became the first state to announce it was banning the sale of all flavored nicotine vaping products, a move that was necessary given the significant toll this epidemic has taken on our society, and particularly our youth. Youth vaping is a public health emergency, and measures such as the flavor ban are necessary to protect public health. It is important that our local, state, and federal health officials not stand idly by while an entire generation of youth becomes newly addicted to nicotine.

Unfortunately, our country is moving backwards when it comes to use of tobacco products among youth. Nationwide, e-cigarette use among middle and high school students increased 900% from 2011-2015.¹ The total number of children who are currently using e-cigarettes rose to an astonishing 3.6 million in 2018, 1.5 million more than the previous year.² Since 2014, e-cigarettes have been the most commonly used tobacco product among youth in the U.S.³ Preliminary data from the 2019 National Youth Tobacco Survey show that youth use of e-cigarettes continues to increase, with over 27% of high school students reporting current (past 30 day) e-cigarette use in 2019. The overwhelming majority of youth e-cigarette users cited the use of popular fruit and menthol or mint flavors.⁴ Between the years 2015-2016 and 2017-2018,

¹ Surgeon General’s Advisory see footnote 1; citing Wang TW, Gentzke A, Sharapova S, et al. Tobacco Use Among Middle and High School Students – United States, 2011-2017. MMWR Morbidity and Mortality Weekly Report. 2018;67(22):629-633.

² See Footnote 3.

³ U.S. Surgeon General’s Advisory on E-Cigarette Use among Youth, available at <https://e-cigarettes.surgeongeneral.gov/documents/surgeon-generals-advisory-on-e-cigarette-use-among-youth-2018.pdf>

⁴ U.S. Food and Drug Administration news release. Trump Administration Combating Epidemic of Youth E-Cigarette Use with Plan to Clear Market of Unauthorized, Non-Tobacco-Flavored E-Cigarette Products. September

counties across Michigan witnessed between a 30% and 118% increase in use among high school students who used an e-cigarette during the past month. In several Michigan counties, more than a third of high school students use e-cigarettes.⁵

This epidemic can be attributed in large part to the appeal of flavored vapor products to youth, as well as the advertising and promotional activities by companies that glamorize use of nicotine products nationwide. Flavors such as “strawberry milk”, “banana split”, “cotton candy”, and “gummy bear” clearly target children, and advertisements for vaping products are often visually appealing to children with pictures of candy on the packaging. According to a recent study, 81% of youth e-cigarette users reported using a flavored e-cigarette at first use.⁶ Earlier this month, the Tobacco Center for Regulatory Science of the American Heart Association published results of a study that found that flavor was a common reason for vaping initiation and that young adults aged 18-24 were nearly twice as likely as people aged 35-44 to identify flavors as the major reason they took up e-cigarette use.⁷ We now have a new generation who are addicted to nicotine, unmistakably because of insidious and fraudulent marketing of these products towards youth and lack of sufficient regulatory oversight.

The Centers for Disease Control and Prevention (CDC) has concluded that the use of e-cigarettes is unsafe for kids, teens, young adults, pregnant women, and adults who do not currently use tobacco products. The nicotine in e-cigarettes is harmful to young people’s developing brains, and young people who use e-cigarettes are more likely to smoke cigarettes in the future.⁸ The FDA has determined that youth who experiment with e-cigarettes are 7.7 times more likely to become established smokers than those who do not experiment.⁹ E-cigarette aerosol that users breathe and exhale can contain harmful substances including nicotine, ultrafine particles, flavoring such as diacetyl, which is a chemical linked to a serious lung disease, volatile organic compounds, cancer-causing chemicals, and heavy metals such as nickel, tin, and lead.¹⁰ Recent research has demonstrated that acute exposure to flavored e-liquids or e-cigarette use can exacerbate endothelial dysfunction, which often precedes cardiovascular diseases.¹¹

11, 2019. <https://www.fda.gov/tobacco-products/youth-and-tobacco/youth-tobacco-use-results-national-youth-tobacco-survey>.

⁵ Michigan Profile for Healthy Youth Survey by MDE & MDHHS, 39 County Data from 2015-2016 and 2017-2018 for e-cigarette usage among high schoolers.

⁶ Villanti AC, Johnson AL, Ambrose BK, et al. Flavored Tobacco Product Use in Youth and Adults: Findings from the First Wave of the PATH Study (2013-2014). *Am J Prev Med.* 2017;53(2):139–151. doi:10.1016/j.amepre.2017.01.026. <https://www.ncbi.nlm.nih.gov/pubmed/28318902>.

⁷ Landry R, Groom A, Vu T, Stokes A, Berry K, Kesh A, Hart J, Walker K, Giachello A, Sears C, McGlasson K, Tompkins L, Mattingly D, Robertson R, and Payne T. The role of flavors in vaping initiation and satisfaction among U.S. adults. *Addictive Behaviors.* Volume 99, December 2019, 106077. Available online at <https://www.sciencedirect.com/science/article/abs/pii/S0306460318311821?via%3Dihub>; see also <https://newsroom.heart.org/news/study-finds-flavors-play-a-role-in-initiation-addiction-to-e-cigarette-use>.

⁸ Centers for Disease Control and Prevention, Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html, March 11, 2019.

⁹ <https://www.federalregister.gov/documents/2016/05/10/2016-10685/deeming-tobacco-products-to-be-subject-to-the-federal-food-drug-and-cosmetic-act-as-amended-by-the#p-761>

¹⁰ U.S. Department of Health and Human Services. E-cigarette use among youth and young adults: a report of the Surgeon General. https://www.cdc.gov/tobacco/data_statistics/sgr/e-cigarettes/pdfs/2016_sgr_entire_report_508.pdf. Atlanta, GA: US Department of Health and Human Services, CDC; 2016.

¹¹ Hee Lee W, Ong S, Zhou Y, Tian L, Bae H, Baker N, Whitlatch A, Mohammadi L, Guo H, Nadeau K, Springer M, Schick S, Bhatnagar A, and Wu J. Modeling Cardiovascular Risks of E-Cigarettes With Human-Induced Pluripotent

E-cigarettes have not been validated or approved by the Food and Drug Administration (FDA) as a smoking cessation strategy. In one study of adult smokers, those who used e-cigarettes were less likely to have stopped smoking combustible cigarettes, and also smoked more cigarettes than those who did not use e-cigarettes.¹² The long-term health effects or efficacy of e-cigarettes for smoking cessation have not been properly evaluated, so any assertions that these products are safe, healthy, or part of a smoking cessation program are not scientifically confirmed.

Lack of sufficient regulatory oversight of these vaping products has contributed to the over 500 confirmed or probable cases of severe lung injury associated with vaping across the country, including 8 deaths.¹³ While we thankfully have not experienced any known deaths in Michigan, as of September 20, 2019 the State of Michigan has 13 confirmed or probable cases, and is currently investigating several more. The vaping-associated lung injuries we know about in Michigan have afflicted younger people, with an age range of 16 to 31 years and a median age of 21 years. The Michigan Department of Health and Human Services is working diligently with the CDC, FDA, our local health departments, and healthcare providers to identify potential cases. We also collect product samples and send them to the FDA laboratory for testing. At this time, we have not identified any specific substance, brand, or product as the cause of this illness. While many cases have reported using tetrahydrocannabinol (THC), some have used both THC and nicotine, and some only nicotine. In light of this current outbreak of vaping associated lung injuries, and the very strong body of evidence linking vaping with future combustible cigarette use, we recommend much stronger oversight of all vaping products. We support the FDA's current proposal to not allow these products on the market unless their safety has been proven. Given the overwhelming data that show the epidemic of youth vaping in Michigan, the Michigan Department of Health and Human Services declared young vaping to be a public health emergency on September 4, 2019. This allowed Michigan to move forward with implementing emergency rules, which were signed by Governor Whitmer and went into effect on September 18, 2019. Michigan's emergency rules make it illegal to sell or distribute any flavored nicotine vaping product, ban fraudulent advertising, and disallow marketing of these products at the point of sale of purchase.

When Governor Whitmer announced the emergency finding by the Department of Health and Human Services and the fact that emergency rules would be forthcoming, leading health care organizations, including the American Academy of Pediatrics, American Academy of Pediatrics Michigan Chapter, American Cancer Society Cancer Action Network, American Heart Association, American Lung Association, Campaign for Tobacco-Free Kids, and Truth Initiative issued a joint statement in support of these actions. These organizations called the action "necessary and appropriate" and called for the FDA to immediately remove all flavored e-cigarettes from the market nationwide. In addition, in response to the alarming levels of e-cigarette use among youth in the United States, on September 10th, 2019, Bloomberg Philanthropies announced the creation of a new \$160 million initiative, which will be led by the Campaign for Tobacco-Free Kids, to end the youth e-cigarette epidemic. Walmart also

Stem Cell-Derived Endothelial Cells. *Journal of the American College of Cardiology*. Volume 73, Issue 21, June 2019. <http://www.onlinejacc.org/content/73/21/2722>.

¹² Kulik MC, Lisha NE, Glantz SA. E-cigarettes Associated With Depressed Smoking Cessation: A Cross-sectional Study of 28 European Union Countries. *Am J Prev Med*. 2018;54(4):603-609. doi:10.1016/j.amepre.2017.12.017

¹³ Centers for Disease Control and Prevention. Outbreak of Lung Disease Associated with E-Cigarette Use, or Vaping online factsheet. https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html. Posted September 12, 2019 at 6:15pm ET.

announced this month that they will no longer sell e-cigarettes. On September 11, 2019, the White House announced plans to move forward to ban flavored e-cigarettes. The State of Michigan supports efforts to keep these products out of the hands of youth and properly regulate them.

The data regarding the epidemic of youth vaping is clear. We must do more to properly regulate these products so that no one, youth or adult, is harmed. Thank you for allowing me to participate in this subcommittee hearing today, and I look forward to working with you as we tackle this public health crisis.