

TESTIMONY

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**BEFORE THE NEW YORK STATE SENATE STANDING COMMITTEES ON CONSUMER PROTECTION,
HEALTH, AND EDUCATION**

Subject: Vaping and Electronic Cigarette Safety

**New York City
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12 Noon
250 Broadway
New York, NY 10007**

Mr. Chairman and Members of the Committee:

Thank you for holding this important hearing on a topic of great concern to New York State's and the nation's public health. I'm privileged to appear before you this morning to testify about the challenges we face regarding youth use of e-cigarettes, safety of e-cigarette products and their potential benefits for adult cigarette smokers.

My name is Dr. Ray Niaura. I am a clinical psychologist, Professor of Social and Behavioral Sciences and Epidemiology, and Interim Chair of the Department of Epidemiology at the College of Global Public Health at New York University (NYU). I have spent my entire professional career engaged in research on understanding and treating tobacco dependence, and finding and testing ways to help smokers quit, including a vast array of behavioral and medical treatments such as nicotine replacement therapy (NRT) and other medications. Over the course of my career, I have also published over 375 peer-reviewed papers mostly on tobacco-related issues. I was President of the Society of Research on Nicotine and Tobacco, the largest scientific society dedicated to understanding use and impact of nicotine on individuals and society. I am also Deputy Editor of the scientific journal, *Nicotine and Tobacco Research*.

Prior to my appointment at NYU, I worked for 8 years at the Truth Initiative, formerly the American Legacy Foundation, a national 501 (c) (3) nonprofit public charity established out of the 1998 Master Settlement Agreement between 46 State Attorneys General and the U.S. tobacco industry. The organization has a respected history of producing public health initiatives proven to reduce tobacco use among young people and adults. Prior to that, I was Professor of Psychiatry and Human Behavior at the Alpert Medical School of Brown University for 25 years.

Please note that I have not and do not obtain funding or support from any tobacco or e-cigarette company.

My testimony today will focus on concerns recently raised concerns regarding the safety of e-cigarette or vaping products, youth use of these products, and ways forward to prevent youth use while maintaining life-saving benefits for adult cigarette smokers.

The pulmonary illness outbreak

The CDC and FDA have documented numerous vaping-associated illnesses and deaths in the US which began in the late summer of this year. The cause of these pulmonary illnesses and deaths has yet to be definitively identified, but the most recent report from the CDC implicates THC-vaping products (1). According to the CDC, 86% of patients suffering vaping-related lung disease reported using THC-containing products, " particularly those obtained off the street or from other informal sources (e.g. friends, family members, illicit dealers), are linked to most of the cases and play a major role in the outbreak." These THC-vaping products are likely to contain contaminants which are responsible for the outbreak of pulmonary illnesses.

This is tragic, of course, and unfortunate because nicotine vaping products are also being blamed for these illnesses when there is little to no evidence that nicotine vaping products are responsible. I am not an apologist for the nicotine vaping industry, but it is important that we identify the true cause of the outbreak of pulmonary illnesses if we hope to control it. Banning all vaping products will not solve this problem because the THC-vape products implicated so far come from unregulated, unlawful sources.

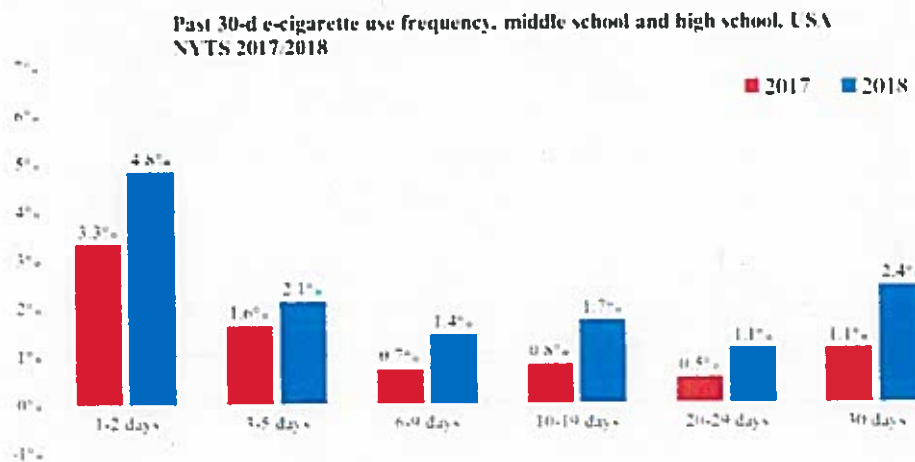
Youth vaping

A separate concern has to do with what has been described as the youth vaping epidemic.

As a public health and tobacco use scientist I, too, share concerns about youth tobacco use and nicotine vaping. For the record, I believe no youths should be using any tobacco or nicotine containing product, or any drug for that matter. We should do all we can to discourage youth use by providing appropriate education and counseling, and by making it difficult to purchase such products. I also believe that companies that manufacture and sell nicotine vaping products should do all they can to make sure that products are marketed only to adult smokers.

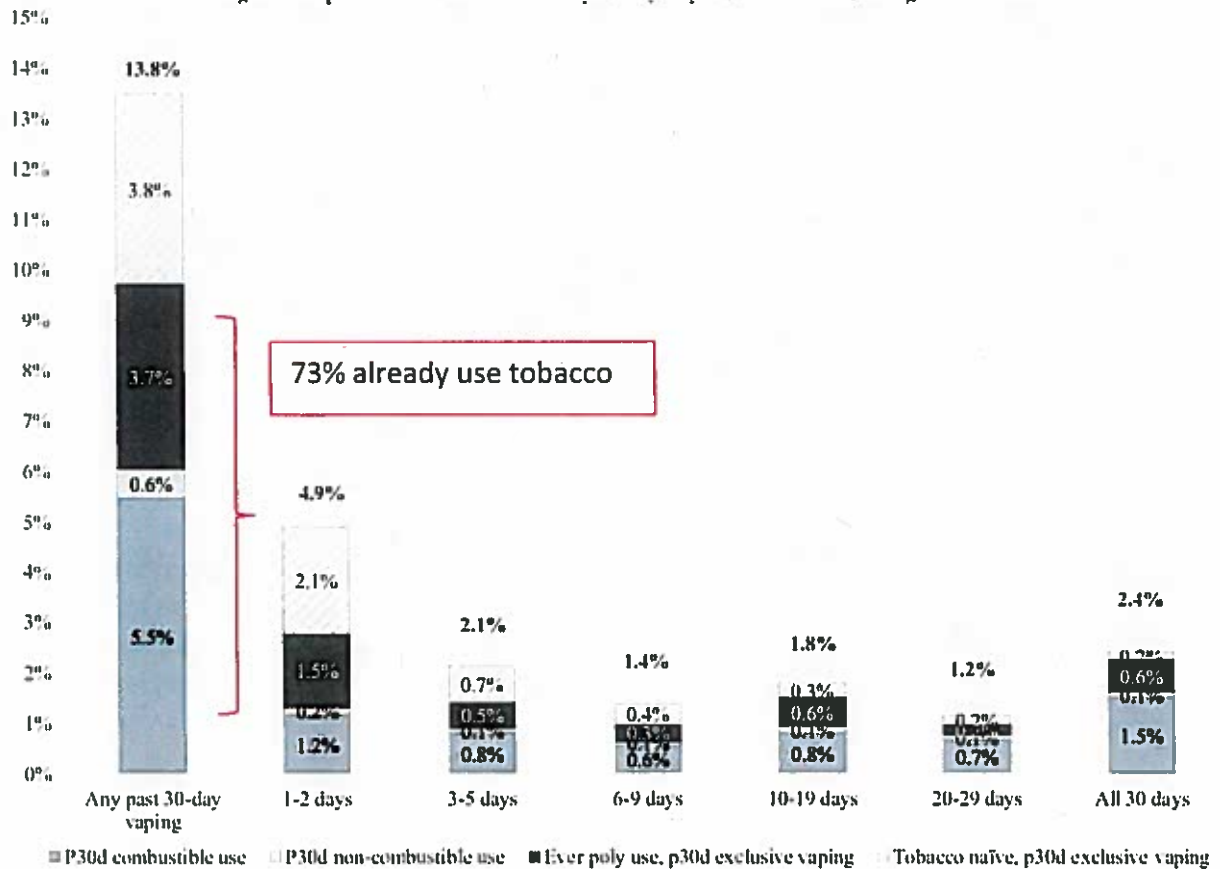
During the Fall of 2018, the FDA, US Centers for Disease Control and Prevention (CDC) and other public health bodies expressed acute concern about youth vaping, when data from national surveys showed that there was an increase in the rate of youth vaping compared to the previous year (2, 3). The concern about youth vaping was reinforced by data coming from the National Youth Tobacco Survey (NYTS) in 2018. When the CDC eventually released the complete NYTS data to the public in the spring of this year (2019), my colleagues and I reviewed it ourselves. We confirmed that past 30-day vaping indeed increased between 2017-2018. – see figure below -

E-cigarette use in youth (total population) 2017/2018



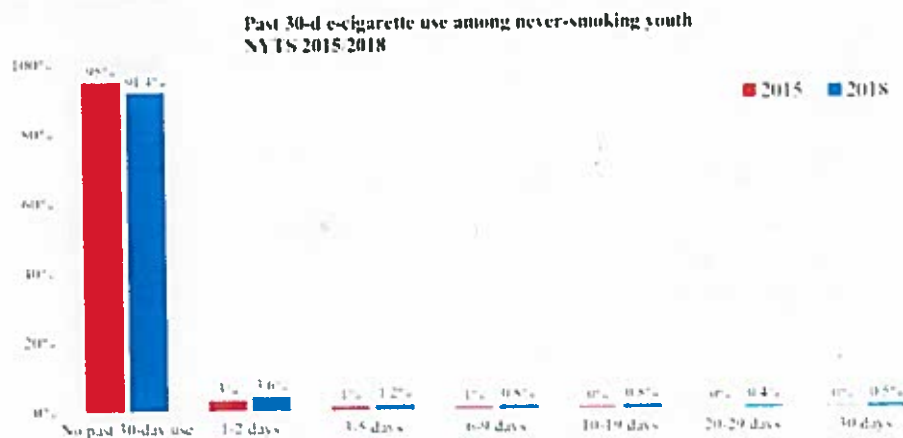
While any increase in use is of concern, our analysis showed that most adolescent vaping was occasional, and that most regular use was concentrated in adolescents who had already been smokers. We found that about three-quarters of vapers reported using other tobacco products, such as cigarettes. Most of the increase in vaping therefore was seen in youth who were already using other tobacco products.

Figure 2. Vapor and Tobacco Product Poly-Use by Days Used in Past 30 Among Users in 2018



We then looked at those youth who had never before used a tobacco product. Vaping in the never tobacco users group was quite low. The vast majority – 91.4% – had not used an e-cigarette. For those who had used an e-cigarette, most of this use was very sparse, and likely experimental – they had only used e-cigarettes 1-2 days in the past month.

E-cigarette use in youth (never smokers) 2015/2018



The major concern with youth vaping is that it could lead to cigarette smoking, dependence, and eventually adverse health consequences. Cigarettes remain the most addictive and by far the most harmful form of tobacco. Our own research with youth and young adults has shown that, while there is a small association between vaping and subsequent smoking (after two or more years), the risk is substantially greater if youth start smoking with a cigarette compared to a vapor product (4,5). The good news in the NYTS data that cigarette smoking among youth is at record low levels, even with an uptick in vaping.

Nevertheless, I acknowledge the concern regarding any level of youth vaping. There is not, however, at this time a clear or easy answer for youth vaping, just as there has not been an easy or complete answer for youth smoking. But it is essential that public health officials act very carefully and deliberately to ensure that whatever actions are taken by the government will produce the desired effects (reducing youth use of tobacco products) and will not have undesirable, unintended consequences, such as depriving cigarette smokers of a safer alternative to cigarette smoking.

The potential for e-cigarettes to help adult smokers stop smoking is a crucial point in the discussion of e-cigarettes. Evidence has been accumulating showing that adult smokers who use e-cigarettes can quit smoking regular cigarettes. A study published in the New England Journal of Medicine this year (6) demonstrated that smokers who used e-cigarettes were twice as likely to quit smoking as compared to those who used nicotine replacement therapy (NRT),

including nicotine patches, gums and lozenges. This was a randomized clinical trial which is considered to be the gold standard of clinical evidence. We have projected that replacing tobacco cigarettes with e-cigarettes in the US will result in 6.6 million fewer premature deaths over 10-years (7).

These results are especially important because we know that, despite their effectiveness, smokers don't often use quit methods such as NRT or other medications (8,9). E-cigarettes are a consumer product that is proving to be very popular with smokers. And e-cigarettes are far safer than cigarettes, as acknowledged by such bodies as our own National Academies of Science, Engineering and Medicine (10), the United Kingdom's Public Health Service, their equivalent of the CDC (11), and results from the PATH Study (12). We should be encouraging smokers to use any and all methods to quit smoking, including e-cigarettes.

Quitting smoking is the number one health priority for cigarette smokers, and we need to use all the tools available to us to reduce this burden, which prematurely claims the lives of over half a million Americans every year. Currently, about 38 million adults in the US smoke cigarettes.

Potential solutions

Vaping and flavor bans. Total vaping bans will not necessarily have desired consequences. There is no evidence that bans will reduce youth nicotine vaping or smoking cigarettes, which would remain legal and easily available. In Massachusetts, where a temporary vaping ban has been enacted, recent sales data show that former smokers who turned to nicotine vaping to quit are now returning to smoking cigarettes. (13)

Bans will also encourage black market activity. Black market products will fill the vacuum a ban creates, only these products will be untested and unregulated, and risks to health will be next to impossible to control. Enforcement of bans would be expensive, intrusive, and less effective than hoped for. Over half of the cigarettes that are smoked in New York City are illegal and are trafficked from other states (14). It's hard to imagine that a vaping ban would fare better than that.

Flavor bans have also been proposed to help deal with youth nicotine vaping. Vaping teens say they like flavors, although that is not the only reason teens use these products. They also believe they are less harmful than smoking cigarettes, which is true. Adult smokers often cite flavors as an important reason they were able to switch to nicotine vape products, and as a reason they don't go back to smoking. Surveys suggest that many successful quitters will turn back to cigarettes if flavors are banned. (15) This would be about the worst thing ex-smokers could do for their health. We don't want that to happen.

How do we move forward? I suggest that a task force, with representation from a diverse set of stakeholders, be formed to explore a range of possible solutions that will balance the need to

prevent youth use of nicotine vape products and the needs of adult smokers to access and use these products to switch away from deadly cigarettes.

Among the solutions that such a task force could consider are: Restricting the range of available flavors to those that have been reviewed and approved by the FDA; Banning all self-service displays; Implementing serious marketing restrictions, including bans on television and radio advertising, and bans on product names likely to appeal to minors such as candy, cartoons, and video games; Implementing a strong enforcement regime, e.g., “three strikes and you’re out”; Increasing taxes to fund education and enforcement; Certification and licensing of vape product stores to monitor products sold and methods used to prevent teens from purchasing products, e.g., no one can enter the premises without age verification.

Technological solutions can also play a role in keeping e-cigarettes out of kids’ hands. Vaping devices can be configured to verify age and lock out use in geo-fenced areas such as schools. There is also more that can be done to improve age-verification methods with regard to online purchases.

I am sure that a task force could think creatively about other potential solutions not mentioned here.

We all need to think about ways of preventing youth access to nicotine vaping products while responsibly making sure that adult smokers have access to all tools for getting away from cigarettes, including switching to e-cigarettes. With proper, prudent, and risk proportionate regulation, e-cigarette products can accelerate declines in smoking and dramatically improve the health of the state’s and the nation’s citizens, and literally save millions of lives (16,17). I firmly believe we can provide smokers with the means to switch off cigarettes while simultaneously preventing youth from vaping and smoking.

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