Follow the Evidence: E-cigarette Regulation Needed to Protect Youth

Adolescent Health & Well-Being

Date Posted:

Nov 08, 2019

E-cigarette use among adolescents in the U.S. has risen to epidemic proportions, putting children at risk for significant harm and a potential lifelong struggle with nicotine addiction. The numbers continue to rise, with more than 1 in 4 high school students and almost 1 in 10 middle school students currently using e-cigarettes. As health care providers who work to keep kids healthy and safe, we find the details of e-cigarette use and their harms incredibly disturbing. We are devastated by the current threat to more than five decades of public health gains in successfully deglamorizing, restricting and decreasing use of nicotine products among youth.

With new developments nearly daily, it can be hard to keep up with the latest on these products. Here's what we know. The term "e-cigarettes" encompasses a wide variety of devices known as vapes, mods, tanks and pod systems. Originally marketed to help adults quit smoking—a claim with little evidence to back it up—e-cigarettes have been particularly appealing to youth because of their discreet designs and sweet and fruity flavors. E-cigarette retailers have successfully marketed these flavor options using multiple media channels and advertising strategies deployed in the past by the tobacco industry to sell conventional tobacco products to youth. In fact, almost all youth who vape use flavored e-cigarettes. And while more than 25% of high school students regularly use e-cigarettes, fewer than 5% of adults actually use these products.

Also contributing to rapid growth in use is a significant misconception among teens that e-cigarettes are safer than other tobacco products. In reality, e-cigarette solutions contain numerous toxicants and carcinogens, just like traditional cigarettes. Additionally, the nicotine concentration in some products is incredibly high, with many vape pods containing the same amount of nicotine as *an entire pack* of cigarettes. Teens often report that they are using multiple pods a day.

Adolescents and young adults who use e-cigarettes are at a 4 times increased risk of becoming traditional cigarette smokers, making it easier for them to develop a lifelong addiction that we know can lead to serious health problems down the road.

In addition to acting as a gateway to traditional cigarettes, e-cigarettes themselves can cause significant harm. There have been reports of seizures resulting from nicotine toxicity from these highly concentrated products, and third-degree burns to legs and genitalia from explosions of devices in pants pockets.

However, the most concerning risk of all is e-cigarette, or vaping, product use associated lung injury (EVALI), a severe lung injury that, to date, has affected more than 2,000 people across the country. To be clear, these are not patients with a mild cough who visit the emergency room and are discharged with an antibiotic. More than 90% of patients suffering are hospitalized, and at least 39 people have presumably died due to their injuries. Three-fourths of patients diagnosed with EVALI are under the age of 35. The most harrowing fact that we must consider is that we have no way of knowing what the long-term prognosis will be for these patients.

Yet even in the face of a growing epidemic, these products lack the regulation needed to adequately protect kids and teens. Currently, U.S. federal laws and regulations do not restrict the advertising of e-cigarettes to consumers, nor do they address the need for the safety testing of these products. If they did, that would mean toxicological tests could be conducted, showing what inhaling the heated chemicals in e-cigarettes does to one's body. As this has not happened, consumers are in the dark and at immense risk. Further, without a ban on all flavored e-cigarettes, child-friendly flavors are available and marketed to youth. In September, the Trump administration announced it was considering removing flavored e-cigarettes from the market, which more than 50 public health and medical organizations already support. These organizations continue to advocate for stronger regulation to fully protect youth from e-cigarettes. In the absence of federal regulation, some localities, like Philadelphia, are stepping in with new legislation to limit adolescent exposure to these products.

We must take action now to protect the gains we have made in reducing youth nicotine use, and coordination is the key to our success. While we need more research to help teen e-cigarette users quit, preventing youth use in the first place should be the U.S. Food and Drug Administration's primary goal. Prevention works. The majority of teens do not use tobacco products or e-cigarettes; appropriate regulatory action, legislation and counter-promotion can continue to ensure that youth live nicotine-free lives. Working together, we can continue to reduce all forms of tobacco use among youth in our communities.

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