E-Cigarette and Vaping Use in Children and Adolescents

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It really is safer than smoking cigarettes. Marijuana is going to be legal in our state soon and it has been legalized in 17 states in the United States. Vaping and e-cigarettes are cleaner than smoking regular cigarettes, especially without a filter. If you are a cigarette smoker and want to quit, using e-cigarettes is a way to reduce your nicotine intake without all of the contaminants in cigarette smoke.

These are all statements you may have heard in one form or another from your patients, your children, or in the media and on the Internet. 

As of December 2019, there were a total of 2,300 patients admitted to hospitals in the United States and 79 deaths associated with what is now officially called e-cigarette or vaping product use-associated lung injury (EVALI). This month’s Feature article, “Lung Injury Associated with E-Cigarette or Vaping Product Use,” by Dr. Anne Griffiths, Anna Rauzi, Katie Stadheim, and Dr. William Wheeler extensively reviews the epidemiology, clinical presentation, radiographic appearance, diagnostic approach, and treatment regimens for EVALI.

The new federal regulations are summarized in the US Food and Drug Administration (FDA) consumer updates:

“it extends the FDA’s regulatory authority to all tobacco products, including e-cigarettes—which are also called electronic cigarettes or electronic nicotine delivery systems (ENDS)—all cigars (including premium ones), hookah (also called waterpipe tobacco), pipe tobacco, nicotine gels, and dissolvables that did not previously fall under the FDA’s authority.”

The new rule also restricts youth access to newly regulated tobacco products by (1) not allowing products to be sold to those younger than 18 and requiring age verification via photo ID; and (2) not allowing tobacco products to be sold in vending machines (unless in an adult-only facility).

Recently, Cullen et al. summarized self-reported tobacco e-cigarette use in a National Youth Tobacco cross-sectional survey of 10,997 high school (grades 9-12) and 8,837 middle school (grades 6-8) students. The study showed that an estimated 27.5% of high school and 10.5% of middle school students are current e-cigarette users. In addition, an estimated 34% of high school and 18% of middle school students who use e-cigarettes report frequent use. Seventy two percent of high school and 59% of middle school students use flavored e-cigarettes such as fruit, menthol, or mint; candy and dessert flavors being the most frequently reported. They also reported that an estimated 5.8% of high school students and 2.8% of middle school students are smoking cigarettes.

Miech et al. reported marijuana vaping prevalence in 8th, 10th, and 12th graders, which demonstrated the 30-day prevalence to be 3.9% of 8th graders, 12.6% of 10th graders, and 14% of 12th graders, all of which represent increases from 2017 to 2019.

E-cigarette use and vaping as described in Dr. Leah Khan’s recent Healthy Baby/Healthy Child column will help pediatric clinicians become more knowledgeable about these devices and products that children, adolescents, and young adults are using.

It is apparent that we should be screening for e-cigarette and vaping use in our patients with respiratory distress,
cough, and gastrointestinal symptoms, but it makes sense to ask about these when seeing preteens and adolescents for their well visits. The potential problems involve nicotine use as there are data to suggest that e-cigarette use can also lead to combustible cigarette use as well. Depending on where the adolescent obtains the e-cigarette product, they may be exposed to potentially toxic oils, metals, or other ingredients that put them at risk for EVALI and subsequent chronic lung problems. 

REFERENCES