More than 11% of US middle school and high school students—nearly 3.1 million—currently use 1 or more tobacco products, especially e-cigarettes, according to a new report from the US Food and Drug Administration (FDA) and the US Centers for Disease Control and Prevention (CDC).

Based on a nationally representative sample of students in public and private middle schools (grades 6-8) and high schools (grades 9-12), researchers estimate that current users—defined as use in the past 30 days—included 16.5% of high school students (more than 2.5 million individuals) and 4.5% of middle school students (530 000 individuals).

Nearly all tobacco use—a habit that is the leading cause of preventable disease, disability, and death among US adults—starts during youth and young adulthood, the authors note.


The study assessed 8 commercial tobacco products, finding that for the ninth consecutive year, e-cigarettes were the most commonly used tobacco product among all students (nearly 2.6 million), followed by cigars (500 000), cigarettes (440 000), smokeless tobacco (330 000), hookahs (290 000), nicotine pouches (280 000), heated tobacco products (260 000), and pipe tobacco (150 000).

The authors note that the survey's findings suggest disparities in use of tobacco products among US students, with prevalence varying by certain demographic factors as well as indicators of social determinants of health, such as education and family income.

Overall, female students were more likely than male students (12.3% vs 10.3%) to report current use of any tobacco product. Such use also was higher among certain groups, including non-Hispanic American Indian or Alaska Native students (13.5%) and non-Hispanic multiracial students (13.0%); students who identified as lesbian, gay, or bisexual (16.0%); students who identified as transgender (16.6%); students who reported severe psychological distress (18.3%); students with low family affluence (12.5%); and students reporting poor grades (mostly Fs) in school (27.2%).

Groups also varied with respect to the types of tobacco products they used. For example, Black students reported the highest current use of any combustible tobacco product (5.7%), particularly cigars (3.3%) and hookahs (2.3%).

"Commercial tobacco product use continues to threaten the health of our nation's youth, and disparities in youth tobacco product use persist," said Deirdre Lawrence Kittner, PhD, MPH, director of CDC's Office on Smoking and Health, in a statement.

Among all students who reported use of any tobacco product, nearly one-third (31%) said they had used multiple tobacco products in the past 30 days. "Multiple tobacco product use among youths is particularly concerning because it is associated with nicotine dependence, which increases the likelihood of sustained tobacco use in adulthood," the report said.

Cigarette smoking among youths in the US has been steadily declining during the past 2 decades, although changes in methodology limited the authors’ ability to compare estimates from 2022 with those from earlier years. About 3.7% of middle and high school students reported current use of any combustible tobacco product in 2022, including cigarettes, cigars, hookahs, and pipe tobacco.
The authors said that their findings suggest ongoing disparities in tobacco product use, which might be attributed in part to more exposure to tobacco promotion and advertising and a higher density of outlets selling tobacco products in racial and ethnic minority communities, among other systemic environmental factors.

Other factors that contribute to youth tobacco product use include misperceptions of harm and flavors and marketing that target younger individuals, notes the CDC. Earlier this month, the FDA said it had issued warning letters to several e-cigarette companies for products packaged to look like toys, food, or cartoon characters.

“The FDA criticized the five relatively unknown companies—Wizman Limited, Shenzhen Fumot Technology, Shenzhen Quawins Technology, Ruthless Vapor and Moti Global—for selling e-cigarettes designed to look like items such as glow sticks, Nintendo Game Boys and walkie-talkies, or to imitate foods such as popsicles,” the agency said. The companies also have been selling e-cigarettes that feature characters from television shows such as “The Simpsons,” “Family Guy,” “Squid Game,” “Rick and Morty,” “Minions,” and “Baby Bus,” some of which are shows aimed at children.

To help young people recognize and avoid the dangers of tobacco use, regulation by FDA and concerted efforts by parents, schools, and those who work with youths are needed, the report said.

Some efforts at the national, state, and local levels include enforcing the federal minimum age of sale of 21 years for all tobacco products, restricting the sales of flavored products in some states and communities, and a proposed federal ban on menthol cigarettes and flavored cigars to help prevent young people from taking up smoking. Other approaches include efforts to raise the price of tobacco products and mass media campaigns and other educational initiatives to warn about the dangers of using tobacco products.

“Continued surveillance efforts of all tobacco product types, including novel products, and sustained implementation of population-based tobacco control strategies, combined with regulation by FDA, are warranted to prevent and reduce youth tobacco product use,” the report said.

ARTICLE INFORMATION
Published: November 29, 2022. doi:10.1001/jamahealthforum.2022.5145
Open Access: This is an open access article distributed under the terms of the CC-BY License. © 2022 Stephenson J. JAMA Health Forum.
Corresponding Author: Joan Stephenson, PhD, Contributing Editor, JAMA Health Forum (Joan.Stephenson@jamanetwork.org).
Author Affiliation: Contributing Editor, JAMA Health Forum.
Conflict of Interest Disclosures: None reported.