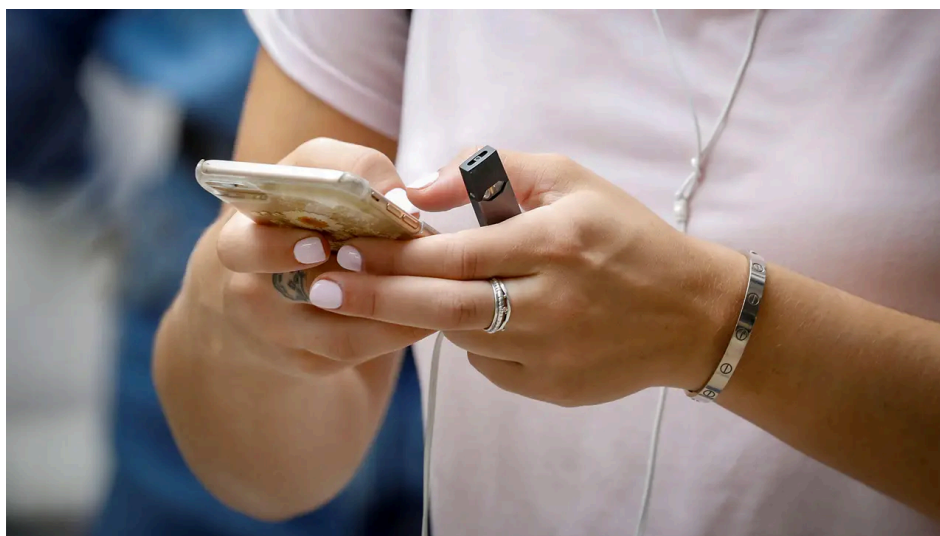


Over 1 Million Kids and Young Adults Vaped Every Day in 2019

— Youth returned to smoking habits of an older era

by [Michal Ruprecht](#), Editorial Intern, MedPage Today

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Each day between 2017 and 2019, nearly 2,300 adolescents and young adults became new daily tobacco users -- a figure that [mirrors](#) statistics from 1989 to 1993.

According to a longitudinal study, the total number of daily vape (or e-cigarette) users under 21 years of age rose to more than 1 million by 2019. Of those, 56.3% used Juul products in particular, reported cancer prevention researcher John Pierce, PhD, of the University of California San Diego in La Jolla, and colleagues in *Pediatrics*.

"The large increase in daily use among U.S. adolescents could presage future health consequences and needs urgent additional action from the [FDA]," the authors

wrote.

"Our data suggest that there may be a new generation of daily tobacco users who did not become dependent on combustible tobacco," they said. "Hopefully, they may never switch to cigarette smoking, thus avoiding many of the health consequences, although e-cigarettes themselves are not harmless."

Juul Labs -- the company behind a sleek e-cigarette device with kid-friendly flavors -- has faced over [2,300 lawsuits](#) for its role in the [youth vaping epidemic](#). While Juul insisted that its products were designed for older smokers, Pierce and coauthors found that rates of e-cigarette use decreased among [older individuals](#).

The proportion of daily Juul users among older age groups was relatively low, with about 42.9% of 21- to 24-year-olds and 22.6% of those older than 25 years reportedly using a Juul device every day.

For their study, Pierce and colleagues used data from the Population Assessment of Tobacco and Health ([PATH](#)) Study, which collects information on tobacco use by product and brand. Participants were age 12-34 years and dependence scores were based on the Wisconsin Inventory of Smoking Dependence Motives.

The investigators used data from two cohorts, which were followed for 2 years (2014-2016 and 2017-2019). The first consisted of individuals surveyed in 2014 before the rise in Juul sales (n=24,409), while the second group was interviewed in 2017 during the Juul surge (n=20,161).

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Compared with the 2014 cohort, the use of vapes for the first time increased by 12.3 percentage points to 24.7% in the 2017 group. The rate of Americans 18-21 years old trying vapes decreased by 3.6 percentage points to 12.2% between the two time periods -- the researchers posited that this may be due to concerns over e-cigarette or vaping-associated lung injury (EVALI), which has been linked to products containing vitamin E acetate and tetrahydrocannabinol and can [mimic COVID-19 symptoms](#) and [even result in death](#).

The authors suggested that the increase in e-cigarette use likely resulted from a combination of "innovative" social media marketing tactics, technology that made higher nicotine concentration aerosols "less aversive," and the appeal of kid-friendly flavors.

"The FDA has responded to this e-cigarette epidemic by reducing the availability of flavored additives to e-cigarettes, presumably focused on reducing experimentation," the authors noted. "It has not limited the amount of nicotine allowed in e-cigarettes, as other countries have done."


Following the expansion of Juul products on the market, overall tobacco use increased from 44.5% to 50.2%. During the 2-year follow-up period, the authors noted that a larger proportion of non-daily tobacco users moved to daily use in the 2017 cohort (5.3% vs 4.9% for 2014 cohort). More than 64% of the increase was fueled by 14- to 17-year-olds and almost half were vape users.

For the youngest age group, e-cigarette dependence was 17.4% in 2017, a figure similar to that of adults in age groups under 35 years old.

Meanwhile, cigarette smoking plummeted among all age groups by 2017. For the youngest age group, smoking cigarettes for the first time decreased by 33% and for those aged 18-21 years, it declined by 49% compared with the 2014 group.

A limitation of the study was that the cohorts were from different time periods, making it difficult for Pierce's group to adjust for time-based variables.



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Disclosures

The study was funded by a grant from the NIH and University of California. Pierce and colleagues reported no conflicts of interest.

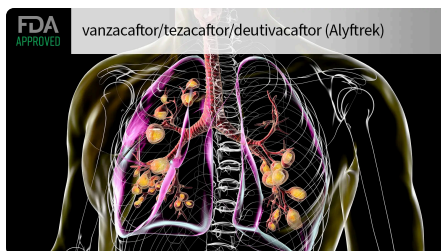
Primary Source

Pediatrics

[Source Reference:](#) *Pierce JP, et al "Daily e-cigarette use and the surge in JUUL sales: 2017–2019" Pediatrics 2022; DOI: 10.1542/peds.2021-055379.*

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