

793,969 is the estimated # of new nicotine vaping initiates in 8th-12th grade during the school year ending in 2021.

Note: This estimate is conservative because survey administration takes place between February and June, and some students who had not yet initiated in the early months of the survey will have done so by the end of the school year.

Details on estimate follow:

Question text:

When (if ever) did you FIRST do each of the following things?

8="Never" 1="Grade 6 or below" 2="Grade 7" 3="Grade 8" 4="Grade 9" 5="Grade 10" 6="Grade 11" 7="Grade 12"

- a. Smoke your first cigarette
- b. Smoke cigarettes on a daily basis
- c. Try smokeless tobacco (snuff, plug, chewing tobacco, snus, dissolvable tobacco)
- d. Vape an e-liquid with nicotine (JUUL, e-cigarette, e-pen, etc.)

Students coded for having started vaping since start of school year if (a) in 12th grade and reported started in 12th grade, or (b) if in 10th grade and reported starting in 10th grade, or (c) in 8th grade and reported started in 8th grade.

This question asked of a 5/6 randomly-selected sample in 8th grade and in 10th grade, and of a 2/3 randomly-selected sample in 12th grade.

Question on grade of first nicotine vaping added to the survey in 2020.

Table 1: Percentage and Size of Student Population that Initiated Nicotine Vaping Since Start of School Year, by Grade

School Year Ending	8 th Grade		10 th Grade		12 th Grade	
	% (95% C.I.)	# students	% (95% C.I.)	# students	% (95% C.I.)	# students
2020	5.0 (3.7 - 6.8)	205,524	4.9 (3.6 - 6.6)	208,536	3.0 (2.2 - 3.9)	112,135
2021	5.1 (4.2 - 6.1)	209,635	3.5 (2.9 - 4.2)	148,955	3.2 (2.5 - 4.1)	119,611

Notes:

- Estimates use sampling weights to take into account complex sampling design of Monitoring the Future and to adjust the standard errors for clustering of students within schools.
- These estimates are conservative because survey administration takes place between February and June, and some students who had not yet initiated in the early months will have done so by the end of the school year.
- Total # of students in 8th, 10th, and 12th grade are 4,110,489, 4,255,843, and 3,737,846, respectively.

Estimate for combined students in 8th-12th grade:

Data for 9th and 11th grade is interpolated because MTF does not collect data at these grades:

- Interpolated # of students in 9th and 11th grade are 4,183,166, and 3,996,844, respectively.
- Interpolated % of new nicotine vaping initiates is 4.3% for 9th grade and 3.4% for 11th grade

Estimated # of new vapers in school year ending 2021 for 8th-12th grade is:

(# new 8th grade vapers) + (# new 9th grade vapers) + (# new 10th grade vapers) +
(# new 11th grade vapers) + (# new 12th grade vapers) =

$.051*(4,110,489) + .043*(4,183,166) + .035*(4,255,843) + .034*(3,996,844) + 0.032*(3,737,846)$

= 793,969