## E-cigarette Use Among Middle and High School Students — United States, 2022

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Since 2014, e-cigarettes have been the most commonly used tobacco product among U.S. middle and high school students (1). Most e-cigarettes contain nicotine, which is highly addictive, can harm the developing adolescent brain, and can increase risk for future addiction to other drugs (2). Among middle and high school current e-cigarette users (i.e., use on  $\geq 1$  day during the past 30 days), use of disposable e-cigarette devices\* increased significantly between 2019 and 2020 (3) and was the most commonly used device type reported in 2021 (4). In 2020 and 2021, approximately eight in 10 middle and high school students who used e-cigarettes reported using flavored e-cigarettes (4,5). CDC and the Food and Drug Administration (FDA) analyzed nationally representative data from the 2022 National Youth Tobacco Survey (NYTS), a school-based, cross-sectional, self-administered survey conducted during January 18-May 31, 2022,<sup>†</sup> using a web-based survey instrument and administered to U.S. middle school (grades 6-8) and high school (grades 9-12) students.§ Participating students could complete the survey whether they were physically in school or at home engaging in remote learning; 99.3% of students reported completing the survey in school. Current e-cigarette use was assessed overall and by frequency of use, device type, flavors, and brands used (any brand used and usual brand used).<sup>9</sup> Weighted prevalence estimates and population totals were calculated.\*\* The NYTS study protocol was reviewed and approved by CDC's institutional review board.<sup>††</sup>

In 2022, 14.1% of high school students and 3.3% of middle school students reported current e-cigarette use (Table). Among current e-cigarette users, 42.3% reported using e-cigarettes frequently,<sup>§§</sup> including 46.0% of high school students and 20.8% of middle school students; daily use was reported among 27.6% of current e-cigarette users, including 30.1% of high school students and 11.7% of middle school students. Among current e-cigarette users, the types of devices most often used were disposables (high school = 57.2%; middle school = 45.8%), followed by prefilled or refillable pods or cartridges (high school = 25.7%; middle school = 21.6%), and tanks or mod systems (high school = 5.9%; middle school = 9.8%), with 11.2% of high school students and nearly 23% of middle school students reporting not knowing the type of e-cigarette used.

Among current e-cigarette users, Puff Bar was the most commonly reported brand used in the past 30 days by both middle and high school students (29.7%), followed by Vuse (23.6%), JUUL (22.0%), SMOK (13.5%), NJOY (8.3%), Hyde (7.3%), and blu (6.5%). Among current e-cigarette users, 14.5% reported that the brand they usually used was Puff Bar, followed by Vuse (12.5%), Hyde (5.5%), and SMOK (4.0%). Approximately one fifth (21.8%) of current e-cigarette users reported "some other brand" as their usual brand.

Among current e-cigarette users overall, 84.9% used flavored e-cigarettes; of these, the reported flavor types, in descending order of use, were fruit (69.1%); candy, desserts, or other sweets (38.3%); mint (29.4%); and menthol (26.6%). A similar pattern was observed among current users of flavored disposable e-cigarettes: fruit (75.2%); candy, desserts, or other sweets (40.4%); mint (29.6%); and menthol (16.7%) (Supplementary Table, https://stacks.cdc.gov/view/cdc/121630). Among current users of flavored pods or cartridges, the reported flavor types used were fruit (58.4%); menthol (53.9%); candy, desserts, or other sweets (30.3%); and mint (27.6%). Among current users of flavored tanks or mod systems, the reported flavor types used were fruit (69.6%); candy, desserts, or other sweets (47.7%); mint (40.1%); and menthol (35.2%).

<sup>\*</sup> Disposable e-cigarettes come prefilled with e-liquid, and the entire device is designed to be discarded after a single use. Other devices have pods or cartridges that hold the e-liquid. Some pods or cartridges come prefilled with e-liquid and are replaced after use, and others can be refilled by the user. Tank or mod-type devices can also be refilled, but are also usually customizable, allowing the user to change the temperature or voltage, nicotine concentrations, and add accessories. † In 2022, 28,291 students from 341 schools participated (overall response

rate = 45.2%).

<sup>&</sup>lt;sup>§</sup> Because of changes in methodology, including differences in survey administration and data collection procedures, the ability to compare estimates from 2022 with those from previous NYTS waves is limited; differences between estimates might be due to changes in methodology, actual behavior, or both. The NYTS was conducted in schools using an electronic tablet in 2019 and 2020. Because of COVID-19 concerns, the 2021 NYTS was conducted using web-based data collection, with approximately one half (50.8%) of students completing it in school. The 2022 NYTS was also conducted using web-based data collection; however, nearly all (99.3%) students completed the survey in school.

<sup>&</sup>lt;sup>9</sup> Brand response options were as follows: blu, Eonsmoke, JUUL, Leap, Logic, Mojo, NJOY, Posh, Puff Bar, SMOK (including NOVO), STIG, Suorin, Vuse, "some other brand(s) not listed here," and "I don't know the brand." Those who selected "some other brand(s) not listed here" could provide a write-in response. Write-in responses were recoded into valid responses. One additional brand, Hyde, is reported based on the write-in responses. As a result, estimates of Hyde use might be underestimated.

<sup>\*\*</sup> Weighted population estimates were rounded down to the nearest 10,000 students.

<sup>&</sup>lt;sup>††</sup> 45 Č.F.R. part 46; 21 C.F.R. part 56.

<sup>§§</sup> Frequent e-cigarette use was defined as use on ≥20 days in the past 30 days. Daily e-cigarette use was defined as use on all of the past 30 days. These estimates are not mutually exclusive.

TABLE. Prevalence of current (past 30-day) e-cigarette use,\* overall and by selected characteristics and school level — National Youth Tobacco Survey, United States, 2022

Estimated weighted no. <sup>1</sup> Stimated weighted no. <sup>1</sup> Current us of ~ cigaretts         2,550,000         9.4 (8.0–11.1)         2,140,000         14.1 (12.4–16.0)         380,000         33 (2.6–4.2)           Anong current - cigaretts         8.4         1.030,000         42.0 (43.2–42.4)         790,000         37.2 (33.4–41.1)         220,000         (60.0 (53.3–66.3)           1-5 days         1.030,000         42.3 (38.2–46.3)         980,000         40.6 (47.2–44.4)         790,000         37.2 (33.4–41.1)         220,000         (20.15.3–26.8)           Daily - cigaretts use <sup>4</sup> 700,000         25.6 (27.3–15.1)         640,000         30.1 (25.6–33.9)         80,000         12.6 (12.8–33.9)           Daily - cigaretts use <sup>4</sup> 700,000         25.2 (17.7–15.1)         540,000         25.4 (17.7–29.9)         70,000         12.6 (12.8–33.9)           Tarikis or nod system         166,000         25.2 (17.7–15.1)         540,000         23.6 (17.4–39.9)         70,000         23.6 (17.4–39.9)           Tarikis or nod system         156,000         23.6 (17.4–39.9)         70,000         23.6 (17.4–39.9)         70,000         23.6 (17.4–39.9)         70,000         23.6 (17.4–39.9) <th></th> <th colspan="2">Overall</th> <th colspan="2">High school</th> <th colspan="2">Middle school</th>		Overall		High school		Middle school	
Among all students (N = 28,291) Current use of conventes         2,550,000         9.4 (8.0–11.1)         2,140,000         14.1 (12.4–16.0)         380,000         3.3 (2.6–4.2)           Among current e-cigarette users         Frequency of use during past 30 days         1.030,000         42.6 (37.2–44.1)         790,000         37.2 (33.4–41.1)         230,000         6.0 (53.3–66.3)           1-5 days         1.080,000         42.3 (38.5–46.3)         900,000         16.8 (13.9–22.0)         700,000         20.8 (15.8–26.8)           Daily - cigarette use <sup>4</sup> 700,000         2.7 (2.6.2–3.10)         640,000         30.1 (2.66–3.3)         40,000         11.7 (8.0–16.7)           Disposables         follow of the used <sup>1</sup> 1.390,000         2.5 (1.79–3.15)         55.4 (49.5–61.0)         12.0000         12.4 (8.1–14.4)         80,000         2.8 (1.72–3.8)           Disposables         follow of the used <sup>1</sup> 1.00,000         2.9 (1.73–3.15)         55.0 (400.0)         2.9 (1.73–3.15)         55.0 (49.5–4.4)         100,000         2.8 (1.73–3.9)         70,000         2.8 (1.73–3.9)         70,000         2.8 (1.73–3.9)         70,000         2.9 (1.73–4.13)         1.0 (7.72–8.9)         70,000         2.9 (1.73–4.2)         8.0 (0.00         2.8 (1.73–3.9)         70,000         2.8 (1.73–3.9)         70,000         2.8 (1.73–3.9)	Characteristic	Estimated weighted no.†	% (95% Cl)	Estimated weighted no.†	% (95% CI)	Estimated weighted no.†	% (95% CI)
Current use of e-cigarette uses Frequency of use during past 30 days 1-3 days 5-19 days 5-10 da	Among all students (N = 28,291)						
Among current e-cigarette users           T-S days         1,030,000         40.6 (37.2-44.1)         790,000         37.2 (33.4-11.1)         230,000         60.0 (53.3-66.3)           6.19 days         1,080,000         42.3 (38.5-46.3)         980,000         30.1 (26.6-33.9)         80,000         10.19 (2.7)           Daily e-cigarette use <sup>8</sup> 700,000         25.3 (49.5-61.0)         640,000         30.1 (26.6-33.9)         40,000         1.7 (8.0-16.7)           Device type most often use <sup>8</sup> 1,390,000         25.1 (49.5-61.0)         1,210,000         57.2 (51.7-62.6)         170,000         45.8 (34.5-7.6)           Prelified or refilable pods or cartridges         630,000         25.7 (12.7-3.1.5)         200,000         12.8 (86-14.4)         800,000         25.2 (17.2-32.0)         80,000         25.2 (17.2-32.0)         80,000         25.2 (17.2-32.0)         80,000         25.2 (17.2-3.3)         400,000         25.4 (17.2-3.0)         70.000         9.8 (7.1-1.3)           Dort know the type         320,000         12.8 (17.2-4.30)         490,000         23.8 (17.9-3.03)         70,000         29.2 (17.2-5.3)         490,000         23.8 (17.9-3.03)         70,000         23.8 (17.9-3.03)         70,000         23.8 (17.9-3.03)         70,000         23.8 (17.9-3.03)         70,000         23.8 (17.9-3.03)	Current use of e-cigarettes	2,550,000	9.4 (8.0–11.1)	2,140,000	14.1 (12.4–16.0)	380,000	3.3 (2.6–4.2)
Frequency of use during past 30 days         i. 3030,000         406 (37.2 - 44.1)         790,000         37.2 (33.4 - 41.1)         730,000         10.6 (37.2 - 28.3)           6 - 19 days         1.080,000         42.3 (88.5 - 46.3)         980,000         46.0 (41.6 - 50.4)         800,000         10.8 (13.9 - 20.2)         70,000         19.3 (12.7 - 28.3)           Daily e-cigarette use <sup>8</sup> 700,000         27.6 (24.5 - 31.0)         640,000         30.1 (26.6 - 33.9)         40,000         11.7 (8.0 - 16.7)           Device type most often use <sup>8</sup> 1.390,000         53.3 (49.5 - 61.0)         1.2 (10.000         57.2 (51.7 - 62.6)         170,000         45.8 (34.5 - 57.6)           Tasks or mod system         160,000         67.5 - 34.4         102,000         59.4 (5-7.8)         80,000         28.6 (7.2 - 32.0)           Any brand*         22.0 (17.8 - 24.9)         400,000         23.8 (17.9 - 30.9)         70.000         20.9 (13.2 - 31.3)           JUU         540,000         23.0 (17.8 - 24.9)         440,000         21.2 (16.2 - 17.8)         30.000         23.8 (17.8 - 30.9)           JUU         540,000         23.6 (1.7 - 30.3)         40.000         23.6 (1.7 - 30.3)         70.000         20.3 (13.2 - 31.8)           JUU         540,000         23.6 (4.4 - 12.0)         10.0 (4.3 (14.4 - 17.9)<	Among current e-cigarette users						
$\begin{split} 1-5 \ days & 1.02 \ dots &$	Frequency of use during past 30 days						
6-19 drys         430,000         17.1 (14.2-20.4)         360,000         16.8 (13.9-20.2)         70.000         19.3 (12.7-28.3)           Daily e-cigarette use <sup>5</sup> 700,000         27.6 (24.5-31.0)         640,000         30.1 (26.6-33.9)         40,000         11.7 (8.0-16.7)           Device type most often used <sup>4</sup> 53.3 (49.5-61.0)         57.2 (51.7-62.6)         170,000         45.8 (34.5-57.6)           Device type most often used <sup>4</sup> 630,000         25.2 (19.7-31.5)         540,000         25.7 (20.3-23.0)         80,000         26.8 (7.1-33.3)           Tanks or mod system         160,000         67.5 (15.4-44)         100,000         29.3 (25.0-34.0)         110.000         30.9 (21.3-42.4)           Yuse         300,000         25.7 (12.9-33.3)         400,000         23.8 (17.9-30.9)         70,000         20.9 (13.2-31.3)           Use         500,000         23.6 (17.9-30.3)         400,000         23.8 (17.9-30.9)         70,000         20.9 (13.2-43.1)           Use         500,000         23.6 (17.9-30.3)         400,000         23.8 (17.9-30.9)         70,000         20.6 (13.4-3.6)           Use         500,000         23.6 (2-11.4)         17.0 (0.00         29.6 (13.2.3-1.2)         14.4-1.2.1)         14.5 (11.7-2.9)	1–5 days	1,030,000	40.6 (37.2-44.1)	790,000	37.2 (33.4–41.1)	230,000	60.0 (53.3–66.3)
20-30 days         1,080,000         42.3 (38.5−46.3)         980,000         40.0 (16.5−30.4)         80.000         20.8 (15.8−26.8)           Daily e-cigarette us <sup>6</sup> 700,000         27.6 (24.5−31.0)         640,000         30.1 (26.5−33.9)         400,000         11.7 (8.0−16.7)           Propisables         1,390,000         55.3 (49.5−61.0)         1,210,000         57.2 (51.7−62.6)         170,000         45.8 (34.5−57.6)           Profiled or refliable pods or cartridges         630,000         25.7 (120.2−32.0)         50.000         59.4 (45.7−8.4)         100,000         59.4 (45.7−8.4)         100,000         28.8 (17.4−3.3)           Dort know the type         320,000         22.6 (17.2−39.9)         700,000         22.8 (17.2−39.9)         700,000         29.3 (25.0−34.0)         110,000         29.8 (17.8−3.6)           JUUL         540,000         22.6 (17.8−26.9)         440,000         22.0 (17.8−26.9)         700,000         28.8 (17.8−3.0)           SMOK (including NOVO)         300,000         13.2 (16.8−1.6)         290,000         14.3 (14.1−1.9)         20.000         7.8 (44.1−1.2)           NOV         200,000         5.0 (36.6−1.8)         90,000         4.7 (25.5 )         -5.6         -5.6           Store         120,0000         5.0 (36.6−1.8)         90,000 <td>6-19 days</td> <td>430,000</td> <td>17.1 (14.2-20.4)</td> <td>360,000</td> <td>16.8 (13.9–20.2)</td> <td>70,000</td> <td>19.3 (12.7–28.3)</td>	6-19 days	430,000	17.1 (14.2-20.4)	360,000	16.8 (13.9–20.2)	70,000	19.3 (12.7–28.3)
Daily e-cigarette use <sup>§</sup> 700,000         27.6 (24.S-31.0)         640,000         30.1 (26.6-33.9)         40,000         11.7 (8.0-16.7)           Device type most often used <sup>1</sup>	20-30 days	1,080,000	42.3 (38.5–46.3)	980,000	46.0 (41.6–50.4)	80,000	20.8 (15.8–26.8)
	Daily e-cigarette use <sup>§</sup>	700,000	27.6 (24.5–31.0)	640,000	30.1 (26.6–33.9)	40,000	11.7 (8.0–16.7)
Disposifies in the second seco	Device type most often used <sup>¶</sup>						
Prefilted or refiliable pods or cartridges 53,000 25,2 (19.7-31.5) 540,000 25,7 (20.2-32.0) 80,000 21.6 (12.8-33.0) 59 (45-7-8) 30,000 918 (17.1-13.5) 20,001 11.2 (8.6-14.4) 80,000 22.8 (17.0-29.9) Any brand** Unif Par 730,000 29,7 (25,5-34.4) 610,000 29,3 (25,0-34.0) 110,000 20,9 (13,2-31.3) 20,001 21.8 (17.9-30.3) 97,0000 22.8 (17.0-29.9) 22.8 (17.0-29.9) 22.8 (17.0-29.9) 22.8 (17.0-29.9) 22.8 (17.0-29.9) 22.8 (17.0-29.9) 22.8 (17.0-29.9) 22.8 (17.0-30.3) 99,000 23.8 (17.9-30.9) 70,000 22.8 (17.8-30.9) 22.9 (13,2-31.3) 20,9 (21,3-24.4) 22.9 (13,2-31.3) 20,9 (21,3-24.4) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.2) 22.9 (21,3-24.1) 22.9 (20,000 23.8 (17,3-30.9) 70,000 23.8 (17,3-30.9) 23.9 (21,3-43.1) 20.9 (23,12.3-21.3) 23.9 (24,0-13.3) 2.9 (24,3-13.3) 2.9 (24,3-13.1) 22.9 (25,7-14.1) 22.9 (20,07,3 (24,3-12.1) 14.9 (24,3	Disposables	1,390,000	55.3 (49.5–61.0)	1,210,000	57.2 (51.7–62.6)	170,000	45.8 (34.5–57.6)
Tanks or mod system160,000 $6.7(3-3.4.4)$ 120,000 $5.9(4.5-7.8)$ $30,000$ $9.8(7,1-13.5)$ Don't know the type $320,000$ $12.8(10.2-16.1)$ $230,000$ $11.2(8.6-14.4)$ $80,000$ $22.8(17,0-29.9)$ Puff Bar $730,000$ $29.7(25.5-34.4)$ $610,000$ $23.8(17.9-30.9)$ $70,000$ $20.9(12.3-21.4)$ Vuse $580,000$ $22.6(17.9-32.3)$ $490,000$ $21.8(17.6-3.27.1)$ $80,000$ $22.8(17.8-30.9)$ JUUL $540,000$ $22.0(17.8-26.9)$ $440,000$ $21.8(17.8-3.20.9)$ $70,000$ $23.8(17.8-30.9)$ NOV (huding NOVO) $330,000$ $33(0.00$ $33.5(10.8-16.6)$ $290,000$ $14.3(11.4-17.9)$ $200,000$ $7.3(4.4-13.5)$ NIOV $200,000$ $8.3(6.0-11.4)$ $170,000$ $8.2(5.6-11.7)$ $20,000$ $7.3(4.4-13.5)$ NIOV $200,000$ $6.5(4.9-8.6)$ $110,000$ $5.4(3.5-6.5)$ $-55$ $-55$ Sucrin $110,000$ $4.8(3.5-6.5)$ $-55$ $-55$ $-55$ Logic $100,000$ $4.3(3.0-6.1)$ $70,000$ $3.2(2.5-3.1)$ $-55$ Logic $100,000$ $3.2(2.4-5.2)$ $60,000$ $3.2(2.4-7.4)$ $120,000$ $3.2.8(2.5-5.6)$ $-55$ Logic $100,000$ $3.2(2.4-5.2)$ $60,000$ $3.2(2.4-7.4)$ $120,000$ $3.2.8(2.5-5.6)$ $-55$ Logic $100,000$ $3.2(2.4-5.2)$ $60,000$ $3.2(2.4-7.4)$ $120,000$ $3.2.8(2.5-4.10)$ Not surge Tort $100,000$ $3.2(2.4-2.3)$ $60,000$	Prefilled or refillable pods or cartridges	630,000	25.2 (19.7–31.5)	540,000	25.7 (20.2–32.0)	80,000	21.6 (12.8–33.9)
Don't know the type         320,000         12.8 (10.2-16.1)         230,000         11.2 (8.6-14.4)         80,000         22.8 (17.0-29.9)           Any brand**         Purf far         730,000         23.7 (25.5-34.4)         610,000         29.3 (25.0-34.0)         110,000         20.9 (13.2-31.3)           JULL         540,000         23.6 (17.9-30.3)         490,000         21.2 (16.3-27.1)         80,000         7.8 (4.1-15.7)           SMOK (including NOVO)         330,000         13.5 (10.8-16.6)         290,000         8.2 (5.6-17.7)         20,000         7.8 (4.1-15.7)           SMOY         200,000         5.3 (6.0-11.4)         170,000         5.6 (3.7-8.7)         30,000         10.2 (5.7-17.6)           SMOK         110,000         5.6 (3.5-6.5)         90,000         4.8 (3.5-6.5)         -55           Storin         110,000         4.8 (3.5-6.5)         -55         -55           Logic         100,000         4.8 (3.5-6.5)         -55         -55           Logic         100,000         3.7 (2.5-5.3)         -55         -55           Logic         100,000         3.7 (2.5-5.3)         -55         -55           Somin         100,000         3.7 (2.5-5.3)         -55         -55           Somin	Tanks or mod system	160,000	6.7 (5.3-8.4)	120,000	5.9 (4.5-7.8)	30,000	9.8 (7.1–13.5)
Any hand**           Puff Bar         730,000         29,7 (25,5-34.4)         610,000         29,3 (25,0-34.0)         10,000         30,9 (21,3-42,4)           Vuse         560,000         22,6 (17,9-30.3)         490,000         23,8 (17,9-30.9)         70,000         22,8 (17,8-30.9)           JUUL         540,000         22,0 (17,8-26.9)         440,000         21,2 (16,3-27.1)         80,000         7,8 (4,4-13.5)           JUUL         200,000         8.3 (6,0-11.4)         170,000         8.2 (5,6-11.7)         20,000         7,8 (4,4-13.5)           JUU         160,000         6.5 (4,9-8.6)         110,000         7,9 (4,6-13.3)        55           Storin         110,000         4.8 (3,6-6.5)         90,000         4.7 (3,2-6.7)        55           Storin         110,000         4.8 (3,6-6.5)         70,000         3.8 (2,2-5.6)        55           Legic         100,000         3.6 (2,4-5.3)         60,000         2.9 (1,2-4,3)        55           Some other brand not listed         700,000         3.2 (2,7-4.3)         120,000         3.2 (2,7-4.3)         120,000         3.2 (2,7-4.3)           Visure/Ont Know the brand         700,000         3.2 (2,7-4.3)         0.2000         2.9 (1,2-2.2,1)         140,000         <	Don't know the type	320,000	12.8 (10.2–16.1)	230,000	11.2 (8.6–14.4)	80,000	22.8 (17.0–29.9)
Puff Bar 730,000 29,7 (25,5-34,4) 610,000 29,3 (25,0-34,0) 110,000 30,9 (13,-42,4) Vias 580,000 23,6 (17,9-30,3) 490,000 23,8 (17,9-30,9) 70,000 20,9 (13,2-31,3) JUUL 540,000 22,0 (17,8-26,9) 440,000 21,2 (16,3-27,1) 80,000 7,8 (4,4-13,5) SMOK (including NOVO) 30,000 13,5 (10,8-16,6) 290,000 14,3 (11,4-17,9) 20,000 7,8 (4,4-13,5) NIOY 200,000 7,3 (4,4-12,0) 160,000 7,9 (4,6-13,3)5 <sup>5</sup> 5 <sup>5</sup> Shot 160,000 7,3 (4,4-12,0) 160,000 5,6 (3,9-7,8) 30,000 10,2 (5,7-17,6) STIG 120,000 5,0 (3,6-6,8) 90,000 4,7 (3,2-6,7)5 <sup>5</sup> 5 <sup>5</sup> Logic 100,000 4,3 (3,6-6,1) 70,000 3,8 (2,5-6,6)5 <sup>6</sup> 5 <sup>6</sup> Logic 100,000 4,3 (3,6-6,1) 70,000 3,8 (2,5-6,6)5 <sup>6</sup> 5 <sup>6</sup> Logic 90,000 4,0 (2,8-5,5) 70,000 3,7 (2,6-5,3)5 <sup>6</sup> 5 <sup>6</sup> Logic 90,000 3,7 (2,6-5,2) 60,000 3,0 (2,0-4,4)5 <sup>6</sup> 5 <sup>6</sup> Some other brand not listed 709,000 3,2 (2,7-3,70,000 3,2 (2,7-3,71, 11,000) 32,8 (2,5-4,10) Not sure/Don't know the brand 700,000 28,3 (2,4-8,73,0) 670,000 3,2 (2,7-3,71, 11,000) 32,8 (2,5-4,10) Not sure/Don't know the brand 700,000 28,3 (2,4-8,73,0) 670,000 3,2 (2,7-3,71,1) 140,000 37,4 (2,9-7-45,8) Usual brand <sup>47</sup> Usual brand <sup>47</sup> Nue sure/Don't know the brand 500,000 14,5 (11,5-18,3) 280,000 14,0 (10,9-17,9) 60,000 17,7 (11,0-27,2) Vise 300,000 12,5 (8,3-18,3) 260,000 13,1 (8,8-19,1)5 <sup>6</sup> 5 <sup>6</sup> SMOK (including NOVO) 90,000 4,0 (2,8-5,8) 80,000 14,0 (10,9-17,9) 60,000 7,7 (3,8-115) No usual brand 80,000 3,3 (2,3-4,7) 50,000 2,9 (19,-4,4)5 <sup>6</sup> 5 <sup>6</sup> SMOK (including NOVO) 190,000 21,8 (17,7-26,6) 450,000 2,26 (17,9-28,1) 60,000 7,7 (3,8-115) No usual brand 50,0000 21,8 (17,7-76,6) 470,000 25,6 (1,9-28,1) 60,000 7,7 (3,8-115) No usual brand No (3,000 9,3 (7,7-11,2) 190,000 9,3 (7,5-11,6) 30,000 9,5 (6,5-13,8) Don't know the brand 590,000 24,8 (2,2-8,3,5) 540,000 30,3 (2,5-9,3,5) 30,000 9,5 (6,5-13,8) Don't know the brand 590,000 24,8 (2,2-8,3,5) 540,000 33,3 (2,2-9,3) 11,000 31,9 (2,3-7,3) No usur/Don't know the brand 590,000 24,8 (2,2-8,3) 10,000 85,5 (8,2-9,87,8) 30,000 13,1 (7,5,1-2,2-4,3) Not sure/Don'	Any brand**						
Vuse         580,000         23.6 (17,9-30.3)         490,000         23.8 (17,9-30.9)         70,000         20.9 (13,2-31.3)           JUUL         540,000         12.0 (17,8-26.9)         440,000         12.1 (16,3-27.1)         80,000         23.8 (17,8-30.9)           SMOK (including NOVO)         330,000         13.5 (10,8-16.6)         290,000         14.3 (11,4-17.9)         20,000         7.8 (4,4-13.5)           NIOY         200,000         6.5 (4,9-8.6)         110,000         7.9 (4,4-13.3)	Puff Bar	730,000	29.7 (25.5–34.4)	610,000	29.3 (25.0–34.0)	110,000	30.9 (21.3–42.4)
JUUL         540,000         22.0 (17.8–26.9)         440,000         21.2 (16.3–27.1)         80,000         7.3 (1.7–30.9)           NOOK (including NOVO)         330,000         13.5 (10.8–16.6)         290,000         18.4 (11.4–17.9)         20,000         7.3 (4.4–13.5)           NIOY         200,000         8.3 (6.0–11.4)         170,000         8.2 (5.6–11.7)         20,000         7.3 (4.3–12.1)           Hyde <sup>++</sup> 180,000         7.3 (4.4–12.0)         160,000         7.9 (4.6–13.3)	Vuse	580,000	23.6 (17.9–30.3)	490,000	23.8 (17.9–30.9)	70,000	20.9 (13.2–31.3)
SMOK (including NOVO)       330,000       13.5 (10.8–16.6)       290,000       14.3 (11.4–17.9)       200,000       7.8 (4.4–13.5)         NIOY       200,000       8.3 (6.6–11.4)       170,000       8.2 (5.6–11.7)       200,000       7.3 (4.3–12.1)         Hyde <sup>††</sup> 180,000       7.3 (4.4–12.0)       160,000       5.6 (3.9–7.8)       30,000       10.2 (5.7–17.6)         SIG       120,000       5.0 (3.6–6.8)       90,000       4.3 (3.5–6.5)	JUUL	540,000	22.0 (17.8–26.9)	440,000	21.2 (16.3–27.1)	80,000	23.8 (17.8–30.9)
NIOY 200,000 8.3 (6.0-11.4) 170,00 8.2 (5.6-11.7) 20,000 7.3 (4.3-12.1) Hydet <sup>+</sup> 180,000 7.3 (4.4-12.0) 160,000 7.9 (4.6-13.3) $-\frac{55}{5}$ 5.65 blu 160,000 6.5 (4.9-8.6) 110,000 7.6 (3.9-7.8) 30,000 10.2 (5.7-17.6) 51G 120,000 5.0 (3.6-6.8) 90,000 4.7 (3.2-6.7) $-\frac{55}{5}$ 5.65 Logic 100,000 4.8 (3.6-6.5) 90,000 4.8 (3.5-6.5) $-\frac{55}{5}$ 5.65 Logic 100,000 4.3 (3.6-6.1) 70,000 3.8 (2.5-5.6) $-\frac{55}{5}$ 5.65 Leap 90,000 4.0 (2.8-5.5) 70,000 3.0 (2.0-4.4) $-\frac{55}{5}$ 5.65 Leap 90,000 3.7 (2.6-5.2) 60,000 3.0 (2.0-4.4) $-\frac{55}{5}$ 5.65 Some other brand not listed 790,000 3.2 (2.7.8-37.0) 670,000 2.2 (2.7.4-37.4) 120,000 32.8 (2.5-5.4) 100 000 2.2 (2.7.4-37.4) 120,000 32.8 (2.5-5.4) 100 000 3.7 (2.6-5.2) 50,000 2.9 (1.8-4.7) $-\frac{55}{5}$ 5.55 Some other brand not listed 700,000 28.3 (2.4.8-32.0) 550,000 2.6.7 (2.2.7-31.1) 140,000 37.4 (29.7-45.8) Usual brand <sup>49</sup> 700,000 12.5 (8.3-18.3) 220,000 14.0 (10.9-17.9) 60,000 17.7 (11.0-27.2) Vuse 300,000 12.5 (8.3-18.3) 220,000 14.0 (10.9-17.9) 60,000 17.7 (11.0-27.2) Vuse 300,000 12.5 (8.3-18.3) 220,000 13.1 (8.8-19.1) $-\frac{55}{5}$ 5.55 MOK (including NOVO) 90,000 4.0 (2.8-5.8) 80,000 4.4 (3.0-6.5) 5.55 5.000 6.7 (3.8-11.5) No usual brand 80,000 3.3 (2.3-4.7) 50,000 2.2.6 (17.9-28.1) 60,000 17.5 (12.2-4.3) Not sure/Don't know the brand 590,000 24.8 (21.2-28.8) 470,000 23.6 (19.5-28.2) 110,000 31.9 (25.4-39.0) Flaved e-cigarette use** 1900 14.0 (10.9-17.9) 60,000 17.5 (12.2-4.3) Not sure/Don't know the brand 590,000 24.8 (21.2-28.8) 470,000 23.6 (19.5-28.2) 110,000 31.9 (25.4-39.0) Flaved e-cigarette use** 14000 5.7 (4.5-7.3) 100,000 5.5 (8.2-9-8.7.8) 300,000 81.5 (75.0-86.6) S000 11.7 (10.000 23.4 (25.6-33.5) 10.000 32.5 (25.6-33.5) 10.000 13.19 (25.4-39.0) Flaved e-cigarette use** 14000 5.7 (4.5-7.3) 100,000 5.2 (4.1-6.5) 30,000 9.5 (6.5-13.9) Not sure/Don't know the brand 590,000 24.6 (21.0-33.1) 500,000 35.5 (82.9-8.7.8) 300,000 81.5 (75.0-86.6) No 230,000 9.3 (7.7-11.2) 190,000 35.2 (4.1-6.5) 30,000 9.5 (6.5-13.9) Mortin 40,000 5.7 (4.5-7.3) 100,000 5.2 (4.1-6.5) 30,00	SMOK (including NOVO)	330,000	13.5 (10.8–16.6)	290,000	14.3 (11.4–17.9)	20,000	7.8 (4.4–13.5)
Hyde <sup>††</sup> 180,000       7.3 (4.4-12.0)       160,000       7.9 (4.6-13.3)	NJOY	200,000	8.3 (6.0–11.4)	170,000	8.2 (5.6–11.7)	20,000	7.3 (4.3–12.1)
blu 160,000 6.5 (4.9–8.6) 110,000 5.6 (3.9–7.8) 30,000 10.2 (5.7–17.6) STIG 120,000 5.0 (3.6–6.8) 90,000 4.7 (3.2–6.7) -5% -5% Suorin 100,000 4.8 (3.6–6.5) 90,000 4.8 (3.5–6.5) -5% -5% Lagic 100,000 4.3 (3.0–6.1) 70,000 3.8 (2.5–5.6) -5% -5% Leap 90,000 3.7 (2.6–5.2) 60,000 3.0 (2.0–4.4) -5% -5% Some other brand not listed 790,000 32.2 (27.8–37.0) 670,000 3.2 (2.7.4–37.4) 120,000 32.8 (2.5–4.10) Not sure/Don't know the brand 700,000 28.3 (2.4–32.3) 650,000 2.9 (1.8–4.7) -5% -5% Some other brand not listed 790,000 32.2 (27.8–37.0) 670,000 32.2 (27.4–37.4) 120,000 32.8 (2.5–4.10) Not sure/Don't know the brand 700,000 28.3 (2.4–32.3) 550,000 14.0 (10.9–17.9) 60,000 17.7 (11.0–27.2) Wuse 300,000 12.5 (8.3–18.3) 280,000 14.0 (10.9–17.9) 60,000 17.7 (11.0–27.2) Vuse 3000,000 4.0 (2.8–5.8) 80,000 4.4 (3.0–6.5) -5% -5% Some other brand not listed 520,000 2.1 (8.17.7–26.6) -5% -5% Some other brand 1590,000 2.1 (8.17.7–26.6) 450,000 2.9 (1.9–4.4) -5% -5% Some other brand not listed 520,000 2.1 (8.17.7–26.6) 450,000 2.9 (1.9–4.4) -5% -5% Some other brand not listed 520,000 2.1 (8.17.7–26.6) 450,000 2.26 (17.9–28.1) 60,000 17.5 (12.2–24.3) Not sure/Don't know the brand 590,000 2.4 (8.2–8.72) 1.790,000 2.9 (1.9–4.4) -5% -5% Some other brand not listed 520,000 2.1 (8.17.7–12.6) 450,000 2.26 (17.9–28.1) 60,000 17.5 (12.2–24.3) Not sure/Don't know the brand 590,000 2.4 (8.2–4.87.2) 1.790,000 2.5 (4.1–6.5) 30,000 9.5 (6.5–13.8) Don't know 140,000 5.7 (4.5–7.3) 100,000 5.2 (4.1–6.5) 30,000 9.0 (5.7–13.9) Among current flavored e-cigarette use*** Fruit 1,450,000 69.1 (65.4–72.6) 1.220,000 68.5 (64.4–72.3) 210,000 7.1.1 (63.9–77.3) Candy, desserts, or other sweets 800,000 38.3 (3.8–42.9) 640,000 33.3 (2.2–23.5) 10,000 43.6 (3.6–31.3) Don't know 140,000 5.7 (4.5–7.3) 100,000 5.2 (4.1–6.5) 30,000 9.0 (5.7–13.9) Among current flavored e-cigarette user Fior type used <sup>1+1</sup> Fruit 1,450,000 69.1 (65.4–72.6) 1.220,000 68.5 (64.4–72.3) 210,000 7.1.1 (63.9–77.3) Candy, desserts, or other sweets 800,000 33.3 (3.8–42	Hyde <sup>††</sup>	180,000	7.3 (4.4–12.0)	160,000	7.9 (4.6–13.3)	§§	§§
STIG       120,000       5.0 (3.6–6.8)       90,000       4.7 (3.2–6.7)       — <sup>59</sup> — <sup>59</sup> — <sup>59</sup> Logic       100,000       4.8 (3.6–6.5)       90,000       3.8 (2.5–5.6)       — <sup>55</sup> — <sup>55</sup> Logic       100,000       4.3 (3.0–6.1)       70,000       3.8 (2.5–5.6)       — <sup>55</sup> — <sup>55</sup> Leap       90,000       3.7 (2.6–5.2)       60,000       3.0 (2.0–4.4)       — <sup>55</sup> — <sup>55</sup> Some other brand not listed       790,000       3.2 (2.7.8–37.0)       670,000       3.2 (2.7.4–37.4)       120,000       3.2.8 (25.5–41.0)         Not sure/Don't know the brand       700,000       2.8.3 (2.4.8–32.0)       550,000       2.6.7 (2.2.7–31.1)       140,000       3.7 (4.29,7–45.8)         Usal brand <sup>441</sup> 130,000       5.5 (3.1–9.6)       … <sup>55</sup> <t< td=""><td>blu</td><td>160,000</td><td>6.5 (4.9–8.6)</td><td>110,000</td><td>5.6 (3.9–7.8)</td><td>30,000</td><td>10.2 (5.7–17.6)</td></t<>	blu	160,000	6.5 (4.9–8.6)	110,000	5.6 (3.9–7.8)	30,000	10.2 (5.7–17.6)
Suorin         110,000         4.8 (3.6-6.5)         90,000         4.8 (3.5-6.5)        93        93        93           Logic         100,000         4.3 (3.0-6.1)         70,000         3.8 (2.5-5.5)        55        55           Mojo         90,000         4.0 (2.8-5.5)         70,000         3.7 (2.6-5.3)        55        55           Easp         90,000         3.7 (2.6-5.3)         60,000         2.9 (1.8-4.7)        55        55           Some other brand not listed         790,000         32.2 (27.8-37.0)         670,000         32.2 (27.4-37.4)         120,000         32.8 (25.5-41.0)           Not sure/Don't know the brand         700,000         28.3 (24.8-32.0)         550,000         2.67 (22.7-31.1)         140,000         37.4 (29.7-45.8)           Usual brand**           55	STIG	120,000	5.0 (3.6–6.8)	90,000	4.7 (3.2–6.7)	99	99
Logic 100,000 4.3 (3.0-6.1) 7,000 3.8 (2.5-5.6) — <sup>39</sup> — <sup>39</sup> 149 Mojo 90,000 4.0 (2.8-5.5) 70,000 3.7 (2.6-5.3) — <sup>55</sup> 55 Leap 90,000 3.7 (2.6-5.2) 60,000 3.0 (2.0-4.4) — <sup>55</sup> 55 Some other brand not listed 790,000 3.2 (27.4-37.4) 120,000 32.8 (25.5-41.0) Not sure/Don't know the brand 700,000 28.3 (24.8-32.0) 550,000 2.6.7 (22.7-31.1) 140,000 37.4 (29.7-45.8) Usual brand <sup>41</sup> Puff Bar 350,000 12.5 (8.3-18.3) 280,000 14.0 (10.9-17.9) 60,000 17.7 (11.0-27.2) Vuse 300,000 12.5 (8.3-18.3) 260,000 13.1 (8.8-19.1) — <sup>55</sup> 55 MOK (including NOVO) 90,000 4.0 (2.8-5.8) 80,000 4.4 (3.0-6.5) — <sup>55</sup> 55 JUUL — <sup>55</sup> — <sup>55</sup> — <sup>55</sup> — <sup>55</sup> Some other brand not listed 520,000 13.3 (2.3-4.7) 50,000 2.9 (1,9-4.4) — <sup>55</sup> 20,000 6.7 (3.8-11.5) No usual brand 80,000 3.3 (2.3-4.7) 50,000 2.9 (1,9-4.4) — <sup>55</sup> 2.5 Some other brand not listed 520,000 24.8 (21.2-28.8) 470,000 2.2 6 (17.9-28.1) 60,000 17.5 (12.2-24.3) Not sure/Don't know the brand 590,000 24.8 (21.2-28.8) 470,000 2.3 6 (19.5-28.2) 110,000 31.9 (25.4-39.0) Plavored e-cigarette use*** Yes 2,110,000 84.9 (82.4-87.2) 1,790,000 85.5 (82.9-87.8) 300,000 81.5 (75.0-86.6) No 230,000 9.3 (7.7-11.2) 190,000 9.3 (7.5-11.6) 30,000 9.5 (6.5-13.8) Don't know 140,000 5.7 (4.5-7.3) 100,000 5.2 (4.1-6.5) 30,000 9.5 (6.5-13.8) Don't know 230,000 9.3 (7.7-11.2) 190,000 9.3 (7.5-11.6) 30,000 9.5 (6.5-13.8) Don't know 140,000 5.7 (4.5-7.3) 100,000 5.2 (4.1-6.5) 30,000 9.5 (6.5-13.8) Don't know 30,000 38.3 (33.8-42.9) 660,000 37.3 (32.6-42.2) 130,000 43.6 (36.3-51.3) Mint 610,000 2.9.4 (25.6-33.5) 540,000 30.3 (25.9-35.1) 70,000 2.7 (18.9-29.3) Menthol 550,000 2.6 (6.2-10.33.1) 500,000 2.8 (17.9-8.3) 210,000 71.1 (63.9-77.3) Menthol 550,000 2.6 (6.2-10.33.1) 500,000 2.8 (17.9-8.3) 30,000 10.8 (7.0-16.1) Chocolate 80,000 4.3 (3.1-5.9) 60,000 3.8 (2.7-5.3) 55 55 55 55 55 55 55 55 55 55 55 55 55	Suorin	110,000	4.8 (3.6–6.5)	90,000	4.8 (3.5–6.5)	99	99
Mojo       90,000       4.0 (2.8–5.5)       70,000       3.7 (2.6–5.3)	Logic	100,000	4.3 (3.0–6.1)	70,000	3.8 (2.5–5.6)	99	99
Leap         90,000         3.7 (2.6–5.2)         60,000         3.0 (2.0–4.4)        39        39           Eonsmoke         80,000         3.6 (2.4–5.3)         60,000         2.9 (1.8–4.7)        55        55           Some other brand not listed         790,000         22.3 (27.8–37.0)         670,000         32.2 (27.4–37.4)         120,000         32.8 (25.5–41.0)           Not sure/Don't know the brand         700,000         28.3 (24.8–32.0)         550,000         26.7 (22.7–31.1)         140,000         37.4 (29.7–45.8)           Usual brand <sup>¶¶</sup> 300,000         12.5 (8.3–18.3)         280,000         14.0 (10.9–17.9)         60,000         17.7 (11.0–27.2)           Vuse         300,000         12.5 (8.3–18.3)         280,000         14.0 (10.9–17.9)         60,000         17.7 (11.0–27.2)           Vuse         300,000         5.5 (3.1–9.6)	Mojo	90,000	4.0 (2.8–5.5)	70,000	3.7 (2.6–5.3)	99	99
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Leap	90,000	3.7 (2.6–5.2)	60,000	3.0 (2.0–4.4)	99 	99 <u> </u>
Some other brand not listed         790,000         32.2 (27.8–37.0)         670,000         32.2 (27.4–37.4)         120,000         32.8 (25.5–41.0)           Not sure/Don't know the brand         700,000         28.3 (24.8–32.0)         550,000         26.7 (22.7–31.1)         140,000         37.4 (29.7–45.8)           Usual brand <sup>¶¶</sup> """         """"         """"         """         """"""	Eonsmoke	80,000	3.6 (2.4–5.3)	60,000	2.9 (1.8–4./)		
Not sure/Lon't know the brand         700,000         28.3 (24.8–32.0)         550,000         26.7 (22.7–31.1)         140,000         37.4 (29.7–45.8)           Usual brand <sup>11</sup> Puff Bar         350,000         14.5 (11.5–18.3)         280,000         14.0 (10.9–17.9)         60,000         17.7 (11.0–27.2)           Vuse         300,000         12.5 (8.3–18.3)         260,000         13.1 (8.8–19.1) $-\frac{55}{-5}$ $-\frac{55}{$	Some other brand not listed	790,000	32.2 (27.8–37.0)	670,000	32.2 (27.4–37.4)	120,000	32.8 (25.5–41.0)
Puff Bar350,00014.5 (11.5–18.3)280,00014.0 (10.9–17.9)60,00017.7 (11.0–27.2)Vuse300,00012.5 (8.3–18.3)260,00013.1 (8.8–19.1) $\_$5$ $\_$5$ Hyde <sup>1+</sup> 130,0005.5 (3.1–9.6) $\_\$5$ $\_\$5$ $\_\$5$ $\_\$5$ MOK (including NOVO)90,0004.0 (2.8–5.8)80,0004.4 (3.0–6.5) $\_\$5$ $\_\$5$ JUUL $\_\$5$ $\_\$5$ $\_\$5$ $\_\$5$ $\_\$5$ $\_\$5$ $\_\$5$ No usual brand80,0003.3 (2.3–4.7)50,0002.9 (1.9–4.4) $\_\$5$ $\_\$5$ Some other brand not listed520,00021.8 (17.7–26.6)450,00022.6 (17.9–28.1)60,00017.5 (12.2–24.3)Not sure/Don't know the brand590,00024.8 (21.2–28.8)470,00023.6 (19.5–28.2)110,00031.9 (25.4–39.0)Flavored e-cigarette use***VYes2,110,00084.9 (82.4–87.2)1,790,00085.5 (82.9–87.8)300,00081.5 (75.0–86.6)No230,0009.3 (7.7–11.2)190,0009.3 (7.5–11.6)30,0009.5 (6.5–13.8)Don't know140,0005.7 (4.5–7.3)100,0005.2 (4.1–6.5)30,0009.5 (6.5–13.8)Candy, desserts, or other sweets800,00038.3 (33.8–42.9)660,00037.3 (32.6–42.2)130,00043.6 (36.3–51.3)Mint610,00029.4 (25.6–33.5)540,00030.3 (25.9–35.1)70,00062.7 (16.3–24.6)Alcoholic drinks150,000<	Not sure/Don't know the brand	700,000	28.3 (24.8–32.0)	550,000	26.7 (22.7–31.1)	140,000	37.4 (29.7–45.8)
Putf Bar 350,000 14.5 (11.5–18.3) 280,000 14.0 (10.9–17.9) 60,000 17.7 (11.0–27.2) Vuse 300,000 12.5 (8.3–18.3) 260,000 13.1 (8.8–19.1) $-\frac{55}{5}$ $-\frac{55}{5}$ $-\frac{55}{5}$ SMOK (including NOVO) 90,000 4.0 (2.8–5.8) 80,000 4.4 (3.0–6.5) $-\frac{55}{5}$ $-\frac{55}{5}$ $-\frac{55}{5}$ JUUL $-\frac{55}{5}$ $-\frac{55}{5}$ $-\frac{55}{5}$ $-\frac{55}{5}$ $-\frac{55}{5}$ $20,000$ 6.7 (3.8–11.5) No usual brand 80,000 3.3 (2.3–4.7) 50,000 2.9 (1.9–4.4) $-\frac{55}{5}$ $-\frac{55}{5}$ Not sure/Don't know the brand 520,000 21.8 (17.7–26.6) 450,000 22.6 (17.9–28.1) 60,000 17.5 (12.2–24.3) Not sure/Don't know the brand 590,000 24.8 (21.2–28.8) 470,000 23.6 (19.5–28.2) 110,000 31.9 (25.4–39.0) Flavored e-cigarette use*** Yes 2,110,000 84.9 (82.4–87.2) 1,790,000 85.5 (82.9–87.8) 300,000 81.5 (75.0–86.6) No 230,000 9.3 (7.7–11.2) 190,000 9.3 (7.5–11.6) 30,000 9.5 (6.5–13.8) Don't know 140,000 5.7 (4.5–7.3) 100,000 5.2 (4.1–6.5) 30,000 9.0 (5.7–13.9) Among current flavored e-cigarette users Flavor type used <sup>+++</sup> Fruit 1,450,000 69.1 (65.4–72.6) 1,220,000 68.5 (64.4–72.3) 210,000 71.1 (63.9–77.3) Candy, desserts, or other sweets 800,000 38.3 (33.8–42.9) 660,000 37.3 (32.6–42.2) 130,000 43.6 (36.3–51.3) Mint 610,000 29.4 (25.6–33.5) 540,000 30.3 (25.9–35.1) 70,000 23.7 (18.9–29.3) Menthol 550,000 26.6 (21.0–33.1) 500,000 28.2 (22.2–35.2) 40,000 16.2 (10.3–24.6) Alcoholic drinks 150,000 7.6 (5.6–10.2) 120,000 6.8 (4.7–9.8) 30,000 10.8 (7.0–16.1) Chocolate 80,000 4.3 (3.1–5.9) 60,000 3.8 (27.5–3) $-\frac{55}{5}$ $-\frac{55}{5}$ Clove or spice 60,000 2.9 (1.9–4.6) 40,000 2.6 (1.6–4.2) $-\frac{55}{5}$ $-\frac{55}{5}$	Usual brand <sup>11</sup>						
Vuse300,00012.5 (8.3 - 18.3) $260,000$ 13.1 (8.8 - 19.1) $99$ $99$ Hyde <sup>††</sup> 130,0005.5 (3.1 - 9.6) $95$ $95$ $95$ $95$ $95$ SMOK (including NOVO)90,0004.0 (2.8 - 5.8) $80,000$ 4.4 (3.0 - 6.5) $95$ $95$ JUUL $95$ $95$ $95$ $95$ $20,000$ $6.7$ (3.8 - 11.5)No usual brand80,0003.3 (2.3 - 4.7) $50,000$ $2.9$ (1.9 - 4.4) $95$ Some other brand not listed520,00021.8 (17.7 - 26.6) $450,000$ $22.6$ (17.9 - 28.1) $60,000$ $17.5$ (12.2 - 24.3)Not sure/Don't know the brand590,00024.8 (21.2 - 28.8) $470,000$ $23.6$ (19.5 - 28.2) $110,000$ $31.9$ (25.4 - 39.0)Flavored e-cigarette use***Yes $2,110,000$ $84.9$ (82.4 - 87.2) $1,790,000$ $85.5$ (82.9 - 87.8) $300,000$ $81.5$ (75.0 - 86.6)No230,0009.3 (7.7 - 11.2)190,000 $9.3$ (7.5 - 11.6) $30,000$ $9.0$ (5.7 - 13.8)Don't know140,0005.7 (4.5 - 7.3)100,000 $5.2$ (4.1 - 6.5) $30,000$ $9.0$ (5.7 - 13.9)Among current flavored e-cigarette usersFlavor type used <sup>†††</sup> Fruit1,450,000 $69.1$ (65.4 - 72.6) $1,220,000$ $68.5$ (64.4 - 72.3) $210,000$ $71.1$ (63.9 - 77.3)Candy, desserts, or other sweets $800,000$ $38.3$ (33.8 - 42.9) $660,000$ $37.3$ (32.6 - 42.2) $130,000$ $43.6$ (36.3 - 51.3)Mint $610,000$ 2	Puff Bar	350,000	14.5 (11.5–18.3)	280,000	14.0 (10.9–17.9)	60,000	17.7 (11.0–27.2)
Hyde '1130,0005.5 (3.1-9.6) $-93$	Vuse	300,000	12.5 (8.3–18.3)	260,000	13.1 (8.8–19.1)	99	99 23
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Hyde''	130,000	5.5 (3.1–9.6)	33		8888	
JOULL=33L	SMOK (Including NOVO)	90,000 ss	4.0 (2.8–5.8) ss	80,000 ss	4.4 (3.0–6.5) ss		33 (7(20,115)
No dual brand       80,000       3.3 (2.3-4.7)       50,000       2.9 (1.9-4.4)      33      33      33         Some other brand not listed       520,000       21.8 (17.7-26.6)       450,000       22.6 (17.9-28.1)       60,000       17.5 (12.2-24.3)         Not sure/Don't know the brand       590,000       24.8 (21.2-28.8)       470,000       23.6 (19.5-28.2)       110,000       31.9 (25.4-39.0)         Flavored e-cigarette use***       Yes       230,000       9.3 (7.7-11.2)       190,000       9.3 (7.5-11.6)       30,000       9.5 (6.5-13.8)         Don't know       140,000       5.7 (4.5-7.3)       100,000       5.2 (4.1-6.5)       30,000       9.0 (5.7-13.9)         Among current flavored e-cigarette users       Flavor type used <sup>+++</sup> Fruit       1,450,000       69.1 (65.4-72.6)       1,220,000       68.5 (64.4-72.3)       210,000       71.1 (63.9-77.3)         Candy, desserts, or other sweets       800,000       38.3 (33.8-42.9)       660,000       37.3 (32.6-42.2)       130,000       43.6 (36.3-51.3)         Mint       610,000       29.4 (25.6-33.5)       540,000       30.3 (25.9-35.1)       70,000       23.7 (18.9-29.3)         Menthol       550,000       26.6 (21.0-33.1)       500,000       28.2 (22.2-35.2)       40,000       16.2 (10.3-24.6) </td <td>JUUL No vevel brand</td> <td></td> <td></td> <td></td> <td></td> <td>20,000</td> <td>0./ (3.۵–۱۱.۵) ۵۵</td>	JUUL No vevel brand					20,000	0./ (3.۵–۱۱.۵) ۵۵
Solite bille bill	No usual brand	80,000	3.3 (2.3-4.7) 21 9 (17 7 26 6)	50,000	2.9(1.9-4.4)	60.000	17 5 (12 2 24 2)
Flavored e-cigarette use***       24.0 (21.2-20.0)       470,000       23.0 (19.3-20.2)       110,000       31.9 (23.4-39.0)         Flavored e-cigarette use***       2,110,000       84.9 (82.4-87.2)       1,790,000       85.5 (82.9-87.8)       300,000       81.5 (75.0-86.6)         No       230,000       9.3 (7.7-11.2)       190,000       9.3 (7.5-11.6)       30,000       9.5 (6.5-13.8)         Don't know       140,000       5.7 (4.5-7.3)       100,000       5.2 (4.1-6.5)       30,000       9.0 (5.7-13.9)         Among current flavored e-cigarette users       Flavor type used <sup>1++</sup> Fruit       1,450,000       69.1 (65.4-72.6)       1,220,000       68.5 (64.4-72.3)       210,000       71.1 (63.9-77.3)         Candy, desserts, or other sweets       800,000       38.3 (33.8-42.9)       660,000       37.3 (32.6-42.2)       130,000       43.6 (36.3-51.3)         Mint       610,000       29.4 (25.6-33.5)       540,000       30.3 (25.9-35.1)       70,000       23.7 (18.9-29.3)         Menthol       550,000       26.6 (21.0-33.1)       500,000       28.2 (22.2-35.2)       40,000       10.8 (7.0-16.1)         Chocolate       80,000       4.3 (3.1-5.9)       60,000       38.8 (2.7-5.3) $-\frac{59}{5}$ $-\frac{59}{5}$ Clove or spice       60,000	Not sure/Don't know the brand	520,000	21.0 (17.7-20.0) 24.9 (21.2-29.9)	430,000	22.0 (17.9-20.1)	110,000	17.5 (12.2–24.5) 31.0 (25.4–30.0)
Flavored e-cigarette user       2,110,000       84.9 (82.4–87.2)       1,790,000       85.5 (82.9–87.8)       300,000       81.5 (75.0–86.6)         No       230,000       9.3 (7.7–11.2)       190,000       9.3 (7.5–11.6)       30,000       9.5 (6.5–13.8)         Don't know       140,000       5.7 (4.5–7.3)       100,000       5.2 (4.1–6.5)       30,000       9.0 (5.7–13.9)         Among current flavored e-cigarette users       Flavor type used <sup>†††</sup> Fruit       1,450,000       69.1 (65.4–72.6)       1,220,000       68.5 (64.4–72.3)       210,000       71.1 (63.9–77.3)         Candy, desserts, or other sweets       800,000       38.3 (33.8–42.9)       660,000       37.3 (32.6–42.2)       130,000       43.6 (36.3–51.3)         Mint       610,000       29.4 (25.6–33.5)       540,000       30.3 (25.9–35.1)       70,000       23.7 (18.9–29.3)         Menthol       550,000       26.6 (21.0–33.1)       500,000       28.2 (22.2–35.2)       40,000       16.2 (10.3–24.6)         Alcoholic drinks       150,000       7.6 (5.6–10.2)       120,000       6.8 (4.7–9.8)       30,000       10.8 (7.0–16.1)         Chocolate       80,000       4.3 (3.1–5.9)       60,000       3.8 (2.7–5.3) $\_$ $\_$ $\_$ $\_$ $\_$ $\_$ <		390,000	24.0 (21.2-20.0)	470,000	25.0 (19.5-20.2)	110,000	51.9 (25.4-59.0)
No       230,000       94.5 (82.4-67.2)       1,79,000       63.5 (62.9-67.8)       300,000       61.3 (73.0-60.0)         No       230,000       9.3 (7.7-11.2)       190,000       9.3 (7.5-11.6)       30,000       9.5 (6.5-13.8)         Don't know       140,000       5.7 (4.5-7.3)       100,000       5.2 (4.1-6.5)       30,000       9.0 (5.7-13.9)         Among current flavored e-cigarette users       Flavor type used <sup>1111</sup> 1,450,000       69.1 (65.4-72.6)       1,220,000       68.5 (64.4-72.3)       210,000       71.1 (63.9-77.3)         Candy, desserts, or other sweets       800,000       38.3 (33.8-42.9)       660,000       37.3 (32.6-42.2)       130,000       43.6 (36.3-51.3)         Mint       610,000       29.4 (25.6-33.5)       540,000       30.3 (25.9-35.1)       70,000       23.7 (18.9-29.3)         Menthol       550,000       26.6 (21.0-33.1)       500,000       28.2 (22.2-35.2)       40,000       16.2 (10.3-24.6)         Alcoholic drinks       150,000       7.6 (5.6-10.2)       120,000       6.8 (4.7-9.8)       30,000       10.8 (7.0-16.1)         Chocolate       80,000       4.3 (3.1-5.9)       60,000       3.8 (2.7-5.3) $^{$$$$$$$$$$       ^{$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$	Voc	2 110 000	010 (02 1 07 2)	1 700 000	955(930,979)	200 000	01 5 (75 0 06 6)
No       250,000       9.3 (7.7-11.2)       190,000       9.3 (7.5-11.5)       30,000       9.3 (0.5-13.6)         Don't know       140,000       5.7 (4.5-7.3)       100,000       5.2 (4.1-6.5)       30,000       9.0 (5.7-13.9)         Among current flavored e-cigarette users       Flavor type used <sup>111</sup> Fruit       1,450,000       69.1 (65.4-72.6)       1,220,000       68.5 (64.4-72.3)       210,000       71.1 (63.9-77.3)         Candy, desserts, or other sweets       800,000       38.3 (33.8-42.9)       660,000       37.3 (32.6-42.2)       130,000       43.6 (36.3-51.3)         Mint       610,000       29.4 (25.6-33.5)       540,000       30.3 (25.9-35.1)       70,000       23.7 (18.9-29.3)         Menthol       550,000       26.6 (21.0-33.1)       500,000       28.2 (22.2-35.2)       40,000       16.2 (10.3-24.6)         Alcoholic drinks       150,000       7.6 (5.6-10.2)       120,000       6.8 (4.7-9.8)       30,000       10.8 (7.0-16.1)         Chocolate       80,000       4.3 (3.1-5.9)       60,000       3.8 (2.7-5.3)	No	2,110,000	04.9 (02.4-07.2) 0 3 (7 7_11 2)	1,790,000	03.3 (02.9-07.0)	30,000	01.3 (73.0-00.0)
Among current flavored e-cigarette users         Flavor type used <sup>1++</sup> Fruit       1,450,000       69.1 (65.4–72.6)       1,220,000       68.5 (64.4–72.3)       210,000       71.1 (63.9–77.3)         Candy, desserts, or other sweets       800,000       38.3 (33.8–42.9)       660,000       37.3 (32.6–42.2)       130,000       43.6 (36.3–51.3)         Mint       610,000       29.4 (25.6–33.5)       540,000       30.3 (25.9–35.1)       70,000       23.7 (18.9–29.3)         Menthol       550,000       26.6 (21.0–33.1)       500,000       28.2 (22.2–35.2)       40,000       16.2 (10.3–24.6)         Alcoholic drinks       150,000       7.6 (5.6–10.2)       120,000       6.8 (4.7–9.8)       30,000       10.8 (7.0–16.1)         Chocolate       80,000       4.3 (3.1–5.9)       60,000       3.8 (2.7–5.3) $\{55}^{55}$ $\{55}^{55}$ Clove or spice       60,000       2.9 (1.9–4.6)       40,000       2.6 (1.6–4.2) $\{55}^{55}$ $\{55}^{55}$ Some other flavor not listed       240,000       11.7 (10.1–13.6)       200,000       11.7 (9.9–13.7)       30,000       11.9 (8.0–17.5)	Don't know	140 000	5 7 (4 5-7 3)	100,000	5 2 (4 1-6 5)	30,000	9.0 (5.7–13.9)
Flavor type used <sup>+++</sup> Fruit       1,450,000       69.1 (65.4–72.6)       1,220,000       68.5 (64.4–72.3)       210,000       71.1 (63.9–77.3)         Candy, desserts, or other sweets       800,000       38.3 (33.8–42.9)       660,000       37.3 (32.6–42.2)       130,000       43.6 (36.3–51.3)         Mint       610,000       29.4 (25.6–33.5)       540,000       30.3 (25.9–35.1)       70,000       23.7 (18.9–29.3)         Menthol       550,000       26.6 (21.0–33.1)       500,000       28.2 (22.2–35.2)       40,000       16.2 (10.3–24.6)         Alcoholic drinks       150,000       7.6 (5.6–10.2)       120,000       6.8 (4.7–9.8)       30,000       10.8 (7.0–16.1)         Chocolate       80,000       4.3 (3.1–5.9)       60,000       3.8 (2.7–5.3) $-\frac{$$}{$$}$ $-\frac{$$}{$$}$ Clove or spice       60,000       2.9 (1.9–4.6)       40,000       2.6 (1.6–4.2) $-\frac{$$}{$$}$ $-\frac{$$}{$$}$ Some other flavor not listed       240,000       11.7 (10.1–13.6)       200,000       11.7 (9.9–13.7)       30,000       11.9 (8.0–17.5)	Among current flavored e-cigarette users	140,000	5.7 (4.5 7.5)	100,000	5.2 (4.1 0.5)	50,000	5.0 (5.7 15.5)
Fravor type used ***         Fruit       1,450,000       69.1 (65.4–72.6)       1,220,000       68.5 (64.4–72.3)       210,000       71.1 (63.9–77.3)         Candy, desserts, or other sweets       800,000       38.3 (33.8–42.9)       660,000       37.3 (32.6–42.2)       130,000       43.6 (36.3–51.3)         Mint       610,000       29.4 (25.6–33.5)       540,000       30.3 (25.9–35.1)       70,000       23.7 (18.9–29.3)         Menthol       550,000       26.6 (21.0–33.1)       500,000       28.2 (22.2–35.2)       40,000       16.2 (10.3–24.6)         Alcoholic drinks       150,000       7.6 (5.6–10.2)       120,000       6.8 (4.7–9.8)       30,000       10.8 (7.0–16.1)         Chocolate       80,000       4.3 (3.1–5.9)       60,000       3.8 (2.7–5.3) $^{$§}$ $^{$§}$ Clove or spice       60,000       2.9 (1.9–4.6)       40,000       2.6 (1.6–4.2) $^{$§}$ $^{$§}$ Some other flavor not listed       240,000       11.7 (10.1–13.6)       200,000       11.7 (9.9–13.7)       30,000       11.9 (8.0–17.5)	Flavor to a succed <sup>+++</sup>						
Fruit       1,450,000       69.1 (65.4-72.6)       1,220,000       68.5 (64.4-72.3)       210,000       71.1 (63.9-77.3)         Candy, desserts, or other sweets       800,000       38.3 (33.8-42.9)       660,000       37.3 (32.6-42.2)       130,000       43.6 (36.3-51.3)         Mint       610,000       29.4 (25.6-33.5)       540,000       30.3 (25.9-35.1)       70,000       23.7 (18.9-29.3)         Menthol       550,000       26.6 (21.0-33.1)       500,000       28.2 (22.2-35.2)       40,000       16.2 (10.3-24.6)         Alcoholic drinks       150,000       7.6 (5.6-10.2)       120,000       6.8 (2.7-5.3)	Flavor type used '''	1 450 000		1 220 000		210.000	71 1 (62 0 77 2)
Carrier, dessens, or other sweets         600,000         56.5 (55.6-42.2)         150,000         43.6 (36.3-51.3)           Mint         610,000         29.4 (25.6-33.5)         540,000         30.3 (25.9-35.1)         70,000         23.7 (18.9-29.3)           Menthol         550,000         26.6 (21.0-33.1)         500,000         28.2 (22.2-35.2)         40,000         16.2 (10.3-24.6)           Alcoholic drinks         150,000         7.6 (5.6-10.2)         120,000         6.8 (4.7-9.8)         30,000         10.8 (7.0-16.1)           Chocolate         80,000         4.3 (3.1-5.9)         60,000         3.8 (2.7-5.3)        \$§        \$§           Clove or spice         60,000         2.9 (1.9-4.6)         40,000         2.6 (1.6-4.2)        \$§        \$§           Some other flavor not listed         240,000         11.7 (10.1-13.6)         200,000         11.7 (9.9-13.7)         30,000         11.9 (8.0-17.5)	Fiult Candy descerts or other sweets	1,450,000	20 2 (22 0 42 0)	1,220,000	272 (226 422)	210,000	/ 1.1 (03.9-//.3)
Minit         010,000         29.4 (21.0-33.3)         540,000         50.5 (23.9-53.1)         70,000         23.7 (18.9-29.3)           Menthol         550,000         26.6 (21.0-33.1)         500,000         28.2 (22.2-35.2)         40,000         16.2 (10.3-24.6)           Alcoholic drinks         150,000         7.6 (5.6-10.2)         120,000         6.8 (4.7-9.8)         30,000         10.8 (7.0-16.1)           Chocolate         80,000         4.3 (3.1-5.9)         60,000         3.8 (2.7-5.3)        \$\$        \$\$           Clove or spice         60,000         2.9 (1.9-4.6)         40,000         2.6 (1.6-4.2)        \$\$        \$\$           Some other flavor not listed         240,000         11.7 (10.1-13.6)         200,000         11.7 (9.9-13.7)         30,000         11.9 (8.0-17.5)	Mint	610,000	20.2 (22.8-42.9) 20 1 (25 6 22 F)	540,000	37.3 (32.0-42.2) 30.3 (35.0-25.1)	70,000	43.0 (30.3-31.3)
Microtion         500,000         20.0 (21.0-35.1)         500,000         20.2 (22.2-35.2)         40,000         16.2 (10.3-24.0)           Alcoholic drinks         150,000         7.6 (5.6-10.2)         120,000         6.8 (4.7-9.8)         30,000         10.8 (7.0-16.1)           Chocolate         80,000         4.3 (3.1-5.9)         60,000         3.8 (2.7-5.3)        \$\$        \$\$           Clove or spice         60,000         2.9 (1.9-4.6)         40,000         2.6 (1.6-4.2)        \$\$         -\$\$           Some other flavor not listed         240,000         11.7 (10.1-13.6)         200,000         11.7 (9.9-13.7)         30,000         11.9 (8.0-17.5)	Monthol	550 000	25.4 (23.0-33.3)	500 000	20.2 (22.7-23.1) 20.2 (22.7 c 2.0)	/0,000	23.7 (10.2-29.3)
Chocolate         80,000         4.3 (3.1–5.9)         60,000         3.8 (2.7–5.3)        \$§        \$§           Clove or spice         60,000         2.9 (1.9–4.6)         40,000         2.6 (1.6–4.2)        \$§        \$§           Some other flavor not listed         240,000         11.7 (10.1–13.6)         200,000         11.7 (9.9–13.7)         30,000         11.9 (8.0–17.5)	Alcoholic drinks	150,000	20.0 (21.0-33.1)	120,000	20.2 (22.2-33.2) 6 8 (1 7_0 9)	30,000	10.2 (10.3-24.0)
Clove or spice         60,000         2.9 (1.9-4.6)         40,000         2.6 (1.6-4.2)        S	Chocolate	80.000	A 3 (3 1_5 0)	60,000	38(27_53)	§§	10.0 (7.0-10.1) §§
Some other flavor not listed 240,000 11.7 (10.1–13.6) 200,000 11.7 (9.9–13.7) 30,000 11.9 (8.0–17.5)	Clove or spice	60,000	2.9 (1.9_4.6)	40 000	26(16_42)	§§	\$\$
	Some other flavor not listed	240.000	11.7 (10.1–13.6)	200.000	11.7 (9.9–13.7)	30,000	11.9 (8.0–17.5)

See table footnotes on the next page.

## TABLE. (*Continued*) Prevalence of current (past 30-day) e-cigarette use,\* overall and by selected characteristics and school level — National Youth Tobacco Survey, United States, 2022

- \* Past 30-day use of e-cigarettes was determined by the question, "During the past 30 days, on how many days did you use e-cigarettes?" Current use was defined as use on ≥1 day during the past 30 days.
- <sup>+</sup> Estimated total number of users was rounded down to the nearest 10,000 students. Overall population totals might not directly sum to corresponding estimates by school level because of rounding or inclusion of students who did not self-report grade level.
- <sup>§</sup> Daily e-cigarette use was defined as use on all 30 of the past 30 days.
- <sup>¶</sup> Device type was determined by the question, "Which of the following best describes the type of e-cigarette you have used in the past 30 days? If you have used more than one type, please think about the one you use most often."
- \*\* All current e-cigarette users were asked, "During the past 30 days, what e-cigarette brands did you use? (Select one or more)." Those who selected "some other brand(s) not listed here" could provide a write-in response. Write-in responses corresponding to an original response option were recoded. Data for Posh are not shown because of statistically unreliable estimates.
- <sup>++</sup> Hyde was not included in the list of prespecified response options, but it was the most commonly provided write-in response for "some other brand." Write-in responses for Hyde were recoded, and all remaining responses were maintained as "some other brand."
- §§ Data were statistically unreliable because of unweighted denominator <50 or a relative SE >30%.
- If a single brand was selected for the question, "During the past 30 days, what e-cigarette brands did you use (Select one or more)," it was reported as their usual brand. Those who selected one or more brand were asked, "During the past 30 days, what brand of e-cigarettes did you usually use? (Choose only one answer)." Those who selected "some other brand(s) not listed here" could provide a write-in response. Write-in responses corresponding to an original response option were recoded. Data for blu, Eonsmoke, Leap, Logic, Mojo, NJOY, Posh, STIG, and Suorin are not shown because of statistically unreliable estimates.
- \*\*\* Flavored e-cigarette use was assessed by response to the question, "Were any of the e-cigarettes that you used in the past 30 days flavored to taste like menthol, mint, clove or spice, alcoholic drinks, candy, fruit, chocolate, or any other flavor?"
- <sup>+++</sup> Flavor type was determined by response to the question, "What flavors were the e-cigarettes that you have used in the past 30 days? (Select one or more)." Those who selected "some other flavor not listed here" could provide a write-in response. Write-in responses corresponding to an original response option were recoded.

In 2022, 2.55 million U.S. middle and high school students currently used e-cigarettes. Most reported using flavored products, and, among those students, approximately seven of 10 used fruit flavors. Disposable products were the most commonly reported device type. Further, among middle and high school students who used e-cigarettes, approximately four in 10 reported frequent use, and approximately one in four reported daily use. The use of tobacco products in any form, including e-cigarettes, by middle and high school students is unsafe. Sustained implementation of comprehensive tobacco prevention and control strategies at the national, state, and local levels, ¶ coupled with FDA regulation and enforcement, is critical to addressing e-cigarette use among middle and high school students (2).

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<sup>55</sup> CDC's website has resources and information related to tobacco prevention and control at the local, state, and national levels, including information to guide parents, teachers, and school administrators and coaches in an informed discussion on e-cigarettes with young persons. https://www.cdc.gov/tobacco/ index.htm

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