What is a JUUL?

The term “electronic cigarettes” covers a wide variety of products now on the market, from those that look like cigarettes or pens to somewhat larger products like “personal vaporizers” and “tank systems.” Instead of burning tobacco, e-cigarettes most often use a battery-powered coil to turn a liquid solution into an aerosol that is inhaled by the user. One e-cigarette device, called a JUUL, has become increasingly popular since its launch in 2015.

JUUL Labs produces the JUUL device and JUULpods, which are inserted into the JUUL device. In appearance, the JUUL device looks quite similar to a USB flash drive, and can in fact be charged in the USB port of a computer. According to JUUL Labs, all JUULpods contain flavorings and 0.7mL e-liquid with 5% nicotine by weight, which they claim to be the equivalent amount of nicotine as a pack of cigarettes, or 200 puffs. JUULpods come in eight flavors: Mango, Fruit, Cucumber, Creme, Mint, Menthol, Virginia Tobacco and Classic Tobacco. Other companies manufacture “JUUL-compatible” pods in additional flavors; for example, the website Eonsmoke sells JUUL-compatible pods in Blueberry, Silky Strawberry, Mango, Cool Mint, Watermelon, Tobacco, and Caffé Latte flavors. There are also companies that produce JUUL “wraps” or “skins,” decals that wrap around the JUUL device and allow JUUL users to customize their device with unique colors and patterns (and may be an appealing way for younger users to disguise their device).

According to data from Wells Fargo, JUUL’s popularity has grown dramatically in the last year, with unit sales increasing more than 600 percent in 2017. In mid-2016, dollar sales share for JUUL products was less than 5 percent, the lowest compared to products sold by the main companies in Nielsen-tracked channels. But by the end of 2017, JUUL sales had surpassed all other companies’ products (see adjacent graph). As a result, JUUL is now more popular than the e-cigarette brands manufactured by the major tobacco companies (blu, Vuse, and MarkTen). According to the most recent data from Wells Fargo, JUUL sales currently represent three-quarters of the market share. As JUUL has surged in

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* Virginia Tobacco and Mint flavors are also sold in 3% nicotine strength varieties.

† Tracked data includes mass channel and convenience stores; does not include online sales or sales from tobacco and vape shops.
popularity, other companies have sought to mimic JUUL’s sleek design and pod-based system, with new devices such as MLV’s PHIX, Mylé Vapor’s Mylé, Altria’s Markten Elite, Reynolds’ Vuse Solo, and ITG Brands’ myblu.5

**JUUL Use among Youth and Young Adults**

According to the National Youth Tobacco Survey, 11.7 percent of high school students and 3.3 percent of middle school students—over 2.1 million youth—were current e-cigarette users in 2017.6 However, a study from Truth Initiative found that a quarter of youth and young adult JUUL users don’t refer to JUUL use as “e-cigarette use” or “vaping,” but rather as “JUULing.”7 Therefore, it is possible that existing surveys may not be capturing the full spectrum of youth e-cigarette use. News articles, letters from school officials, and anecdotal evidence indicate that JUUL has gained popularity among youth and young adults across the country, from middle schools to college campuses. A 2018 study found that nearly one-fifth of youth (ages 12-17) surveyed reported having seen JUUL used in their school.8 News stories attribute JUUL’s sleek and discreet design to its appeal among this population. For example:

“High school and college students are rushing to retailers to buy the product because its discreet design makes it easy to hide from parents and teachers while also giving the user a big hit of nicotine. Some students have bragged on social media of using the JUUL in class, even though e-cigarettes are banned indoors at most schools.” – Pittsburgh Post-Gazette9

“An editor for New York University’s student newspaper documented JUUL’s rising on-campus popularity, even in dorm rooms. A student newspaper at the University of Illinois called JUUL a "new epidemic is sweeping across campus." And in suburban D.C., a high school's principal took doors off its bathroom stalls to keep students from using drugs inside —namely JUUL.” – USA Today10

“One reason JUUL and vape pens are so popular among teens currently might be that they can be used indoors without attracting unwanted attention or creating a stench...On Twitter, teens post about their usage in school. The most brazen of them fire up their e-cigarettes while their teachers' backs are turned.” - NPR11

The availability of flavors may also contribute to JUUL’s popularity among youth. A national survey found that that 81 percent of youth aged 12-17 who had ever used e-cigarettes had used a flavored e-cigarette the first time they tried the product, and that 85.3 percent of current youth e-cigarette users had used a flavored e-cigarette in the past month. Moreover, 81.5 percent of current youth e-cigarette users said they used e-cigarettes “because they come in flavors I like.”12

**Health Concerns and JUUL**

The number of youth using e-cigarettes, including JUUL, is alarming and raises serious concerns that e-cigarettes could be an entryway to nicotine addiction and use of regular cigarettes for some kids. Though there is insufficient research on the long-term effects of using e-cigarettes in general, and certainly not specific to JUUL, the use of such products still raises concerns because they contain nicotine. The company claims that the nicotine in JUUL is from “nicotine salts found in leaf tobacco, rather than free-base nicotine,” which they claim “accommodate cigarette-like strength nicotine levels.”13 The health impact of that specific form of nicotine is yet unknown.

While it is still an open scientific question whether e-cigarettes might be able to help adult smokers give up cigarettes, kids should not be using any tobacco product, including e-cigarettes. Nicotine is a highly addictive drug that can have lasting damaging effects on adolescent brain development.14 Nicotine also impacts the cardiovascular system.15 The Surgeon General concluded that, "The use of products containing nicotine poses dangers to youth, pregnant women, and fetuses. The use of products containing nicotine in any form among youth, including in e-cigarettes, is unsafe.”16 Educating youth about the dangers of JUUL and nicotine use is critical because a study from Truth Initiative found that 63 percent of 15-24 year old JUUL users did not know the product always contains nicotine (all pods sold from JUUL do contain nicotine).17
The Surgeon General found that while more research is needed, evidence from several longitudinal studies suggests that e-cigarette use is “strongly associated” with the use of other tobacco products among youth and young adults, including conventional cigarettes. The National Academy of Sciences (formerly the Institute of Medicine) also concluded in its 2018 report that, “There is substantial evidence that e-cigarette use increases risk of ever using combustible tobacco cigarettes among youth and young adults.”

**Marketing and Accessibility of JUUL**

When JUUL was first launched in 2015, the company used colorful, eye-catching designs and youth-oriented imagery and themes, such as young people dancing and using JUUL. JUUL’s original marketing campaign included billboards, YouTube videos, advertising in Vice Magazine, launch parties and a sampling tour.

More recently, JUUL has updated its marketing code with the purported goal of limiting youth exposure to its advertising. Its current marketing materials focus primarily on its popular flavors and on messaging that encourages smokers to “make the satisfying switch.” However, social media continues to help fuel JUUL’s popularity. A study analyzing JUUL marketing noted that JUUL was one of the first major e-cigarette brands to rely heavily on social media to market and promote its products. The study found that JUUL’s initial marketing expenditures in traditional channels were modest compared to competing brands, and that these expenditures decreased as the brand increased content and received more promotion on social media channels like Instagram and Twitter. While JUUL’s Instagram account is age-restricted to those 18 and older, its Twitter account is not age restricted and contains similar content. Additionally, JUUL-sponsored posts and user-generated posts that tag (e.g., #JUULvapor, #doit4JUUL) and feature JUUL have no restrictions. These kind of social media posts can increase exposure to pro-e-cigarette imagery and messaging, by making JUUL use look cool and rebellious. In April 2018, the FDA sent an official request for information to JUUL Labs to obtain more information about the youth appeal of the product, including the company’s marketing practices.

JUUL devices and JUULpods are available for sale on JUUL’s website and other online retailers as well as in convenience stores, vape shops, and tobacco retailers. To access JUUL’s website, users must indicate that they are 21 or older by simply clicking on a button, but JUUL asserts that it uses stricter age verification processes for online purchases. FDA law prohibits sales of e-cigarettes to those under age 18 and some state and local laws have higher minimum age-of-sale laws. Youth are obtaining JUUL products from social sources who may be over age 18, online or in-person from retailers that are not in compliance with state or federal law, or from online resellers like ebay and Craigslist that have no age verification. A 2018 study found that among surveyed youth JUUL users (ages 12-17), three-quarters had purchased a JUUL device from a retail store and half had gotten JUUL from a social source. In April 2018, the FDA sent warning letters to 40 retailers across the country for illegally selling JUUL products to minors. Though the up-front cost of the device is high (a JUUL starter kit, which includes the device, charger and 4 JUULpods, is $49.99 on the JUUL website), advocates have shared stories of kids pooling together money to share a device and sell “hits” from the device to recoup the cost.

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‡ ebay policy prohibits sale of tobacco products; however, JUUL products have been found for sale on the website under other categories such as electronics, with product listings that neglect to use the terms “tobacco” and/or “nicotine.” FDA recently contacted ebay regarding these violations and ebay has worked to remove JUUL listings and implement measures to prevent new JUUL listings (although some JUUL products are still available on ebay).
JUUL and Youth

Campaign for Tobacco-Free Kids, November 12, 2018 / Laura Bach

22 FDA Center for Tobacco Products, Statement from FDA Commissioner Scott Gottlieb, M.D., on new enforcement actions and a Youth Tobacco Prevention Plan to stop youth use of, and access to, JUUL and other e-cigarettes,” April 24, 2018, https://www.fda.gov/NewsEvents/PressAnnouncements/ucm605432.htm.