

The Evolution of E-Cigarette, or Vaping, Products

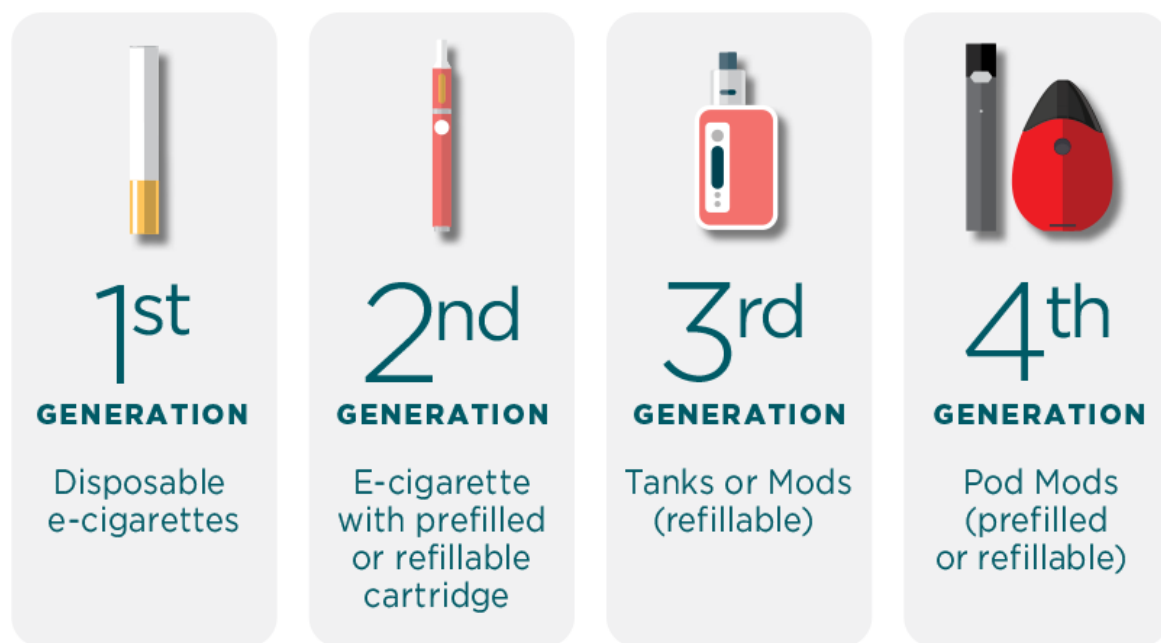


Image: Figure showing the evolution of e-cigarette or vaping products from disposable e-cigarettes that look like cigarettes, to e-cigarettes with cartridges, to tanks or mods, to pod mods

Vaping and youth

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Roadmap



- Why care about vaping?
- Aren't these products regulated?
- Emerging issues

Image: photo of vaping devices labeled “Vaporfi best vapes of 2022”

Why care about vaping?

E-cigarette use is common among youth

- Nearly a quarter of high schoolers in the US use tobacco products
 - The majority (82.5%) use flavored e-cigarettes
- In 2020, purchases shifted online (COVID-related)
 - Online marketing is the tobacco industry's primary form of advertising
 - Over a quarter of online purchases are not age-verified (“click through”)
 - 76.5% of online purchase attempts by minors are successful
- Although the FDA seeks to prevent underage sales, many violations are not remediated



Image: YOLO
Tropical Fruit
disposable vape
Source: *eightvape.com*

Example: synthetic nicotine (March 2022)

The Loophole That's Fueling a Return to Teenage Vaping

Sales are rising of flavored e-cigarettes using synthetic nicotine that evades regulatory oversight, a gap that lawmakers are now trying to close.

Give article    38



Image: NYT article titled "The loophole that's fueling a return to teenage vaping"

FRIDAY, April 15, 2022
(HealthDay News) -- A new law will ensure that vaping companies making electronic cigarettes using synthetic nicotine, in fruit flavors that appeal to teenagers, can be regulated by the U.S. Food and Drug Administration.

E-cigarette use harms health

- Users perceive e-cigarettes as being
 - healthier than combustible cigarettes
 - useful for smoking cessation
- However
 - e-cigarette use among youth leads to combustible cigarette use
 - smoking and vaping may increase the risk of contracting COVID-19

A USC study finds that teens who vape — especially those who use modifiable e-cigarette devices — end up smoking far more cigarettes than those who don't.

BY Leigh Hopper • APRIL 10, 2020



Image: photo of smoky lungs with title reading “A USC study finds that teens who vape—especially those who use modifiable devices—end up smoking far more cigarettes than those who don’t”

Aren't these products regulated?

Research and regulation has lagged

- Most studies were completed before 2016
 - Advertising claims related to health, cessation and circumventing clean indoor air laws
- 2016 FDA deeming regulations made some advertising claims illegal
- 2021 regulatory changes
 - PMTA (Premarket Tobacco Product Application) acceptances
 - PACT (Prevent All Cigarette Trafficking) Act
 - Prevented USPS from shipping vaping products
 - Discouraged common carriers (USPS, FedEx) from doing so
- 2022: FDA given authority to regulate synthetic nicotine



Image: US FDA logo



Image: BATF logo

What we know about advertising

- Current advertising claims emphasize cessation and stealth, as well as flavors, cartoons, and regulatory approval
 - “E-cigarettes can be simple and stealthy” (Vaping360)
 - “We specialize in our premium eliquids, all of which are all made from FDA approved food flavorings, kosher food grade VG and PG and pharmaceutical grade 99.9% pure nicotine” (Vapor Rage)
 - “Experience pharma grade quality with the best e-cig in the market” (ePuffer)



Image: Candy King e-liquid from 8vape (January 2022)

Retailers suggest products have regulatory approval

- “PMTA Accepted” (source: 8vape, January 2022)

Images: e-cigarette advertisements suggesting FDA approval

The advertisement features a purple background with the text "BEST-SELLING FLAVORS IN SALTS & FREEBASE!". On the left, there are two product boxes: "Pod Juice Strawberry Kiwi" (60 ML, 3 MG) and "Pod Juice Cotton Carnival" (30 ML, 55 MG). A gold seal in the top left corner reads "AWARD WINNING FLAVORS". A pink button on the right says "SHOP NOW!". At the bottom, a blue banner reads "PMTA ACCEPTED".

Pod Juice

BEST-SELLING FLAVORS
IN SALTS & FREEBASE!

SHOP NOW!

PMTA ACCEPTANCE

FDA warnings are ignored

- 8 online retailers received warnings in first week of September 2021—15 days to remediate
 - In December 2021, 5 of 8 continued to advertise the named products for sale
 - 3 of 8 contained content suggesting they continued to sell the products (a photo without a listing or a listing without a photo)
 - 4 did not request age verification
 - 4 used “click through” age verification



Image: Vapor Boss “Boss Bar Mango” on sale for 48% off in January 2022 (violation received September 2021)

Product innovation is faster than regulation

- Online retailers promote different flavors seasonally
- Seasonal promotions may be used strategically to sidestep regulation



Images:
seasonal
advertisements
from 8vape,
lovecigs and
Vapor Boss

New companies work around new regulations

- Under PACT, online retailers cannot use common carriers to ship vaping products
- Workarounds
 - “X” Delivery

As you may be aware, the vape industry has been pl. committed to retaining and maintaining all current a safely and in a timely manner.

Below is a rough outline of our logistics plan. You wil

Images: marketing and social media discussions of shipping workarounds under PACT

Search r/Vaping Search Reddit

Eightvape says they secured an alternate shipping method.

Posted by u/acsmith1972 10 months ago

11 Eightvape says they secured an alternate shipping method.

BingoBango89 OP · 9 mo. ago

TherionDNA75C / DLC Jenna rda

Good to know it's a viable shipping option. From what I can gather it's a logistics company literally called "X" that uses various couriers to deliver.

1

Reply Share Report Save Follow

crindler1 · 8 mo. ago

I ordered on the 16th and my juice just arrived!! Even though shipping tracking still shows it in Wyoming. It was a dude in an unmarked car who simply asked me to sign the package and then he took a picture of it with his phone. Weird. But still got my juice

2

Reply Share Report Save Follow

Get instant access to multiple unused warehouses. [Sign up here](#)

Eightvape Team

Local policy innovations: flavor bans?

- On July 7, 2017, San Francisco enacted the first comprehensive flavor ban in the US
 - Included menthol as a flavor
 - Expanded ban to new alternative tobacco products
- Multiple localities in California and beyond followed suit
- In April 2021, US FDA announced it supported these interventions

FDA NEWS RELEASE

FDA Commits to Evidence-Based Actions Aimed at Saving Lives and Preventing Future Generations of Smokers

Efforts to ban menthol cigarettes, ban flavored cigars build on previous flavor ban and mark significant steps to reduce addiction and youth experimentation, improve quitting, and address health disparities

[f Share](#) [t Tweet](#) [in LinkedIn](#) [✉ Email](#) [🖨 Print](#)

For Immediate Release: April 29, 2021

Image: FDA news release stating “FDA commits to evidence-based actions aimed at saving lives and preventing future generations of smokers”

Slide 14

AD4 Apollonio, Dorie, 5/19/2022

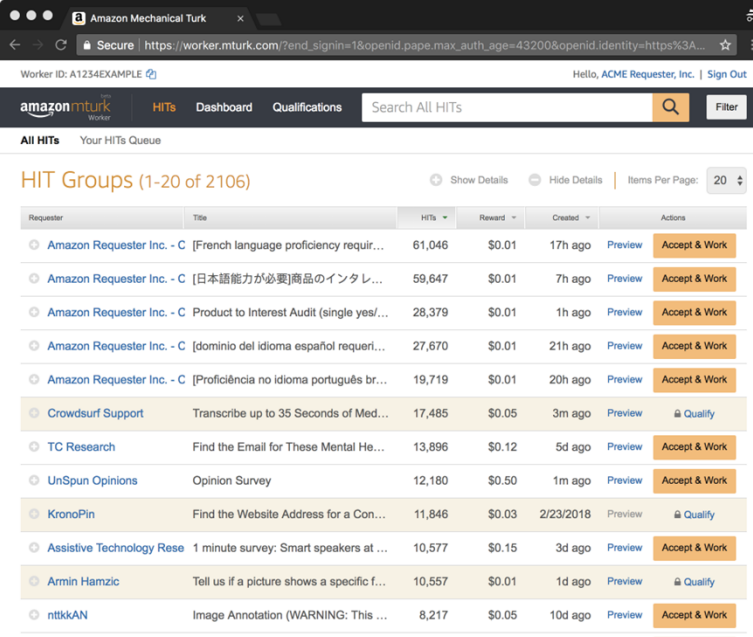
San Francisco's comprehensive flavor ban

- “On July 7, 2017, the City and County of San Francisco (“the City”) approved Article 19Q of the San Francisco Health Code (SFHC 19Q) which prohibits all San Francisco retail establishments from the sale or distribution of any flavored tobacco product and flavored cigarettes including menthol cigarettes.” –*SFDPH*
- Took effect July 21, 2018
 - Sale of all flavored tobacco products became illegal
 - All retailers inspected; those in violation were
 - issued citations,
 - required to immediately state how they would modify their practices, and
 - file future reports verifying that they were no longer displaying or selling these products

Outcomes: young adults

- Time-series cross-sectional study of San Francisco residents
- Data collected using Mechanical Turk
 - December 2018 v November 2019
 - Ages 18-34, n=247
- Tobacco product use overall decreased
 - Combustible cigarette use did not change
 - E-cigarette use declined
- Respondents reported sales of flavored products had persisted
- Authors' conclusion
 - “a comprehensive ban of all flavors, even when done by an individual city, will significantly reduce flavored tobacco product use, despite incomplete compliance”

Yang Y, Lindblom EN, Salloum RG, Ward KD. The impact of a comprehensive tobacco product flavor ban in San Francisco among young adults. *Addict Behav Rep.* 2020;11:100273.



The screenshot shows the Amazon Mechanical Turk interface. At the top, there's a navigation bar with 'amazonmturk Worker', 'HITS', 'Dashboard', and 'Qualifications'. Below this is a search bar for 'All HITS'. The main content area displays 'HIT Groups (1-20 of 2106)'. A table lists various HIT groups with columns for Requester, Title, HITs, Reward, Created, and Actions. The table includes entries from Amazon Requester Inc., Crowdsurf Support, TC Research, UnSpun Opinions, KronoPin, Assistive Technology Rese, Armin Hamzic, and nttkkAN.

Requester	Title	HITs	Reward	Created	Actions
Amazon Requester Inc. - C	[French language proficiency requir...	61,046	\$0.01	17h ago	Preview Accept & Work
Amazon Requester Inc. - C	[日本語能力が必要]商品のインタレ...	59,647	\$0.01	7h ago	Preview Accept & Work
Amazon Requester Inc. - C	Product to Interest Audit (single yes/...	28,379	\$0.01	1h ago	Preview Accept & Work
Amazon Requester Inc. - C	[dominio del idioma español requeri...	27,670	\$0.01	21h ago	Preview Accept & Work
Amazon Requester Inc. - C	[Proficiência no idioma português br...	19,719	\$0.01	20h ago	Preview Accept & Work
Crowdsurf Support	Transcribe up to 35 Seconds of Med...	17,485	\$0.05	3m ago	Preview Quality
TC Research	Find the Email for These Mental He...	13,896	\$0.12	5d ago	Preview Accept & Work
UnSpun Opinions	Opinion Survey	12,180	\$0.50	1m ago	Preview Accept & Work
KronoPin	Find the Website Address for a Con...	11,846	\$0.03	2/23/2018	Preview Quality
Assistive Technology Rese	1 minute survey: Smart speakers at ...	10,577	\$0.15	3d ago	Preview Accept & Work
Armin Hamzic	Tell us if a picture shows a specific f...	10,557	\$0.01	1d ago	Preview Quality
nttkKAN	Image Annotation (WARNING: This ...	8,217	\$0.05	10d ago	Preview Accept & Work

Image: Amazon Mechanical Turk job board

Emerging issues

Co-marketing with other products

- Dietary supplements (can be combined with nicotine solution)
 - Kava
 - Vice: “Definitely pleasant, definitely relaxing, and definitely not illegal. When was done with the [kava] wax, I switched out the chambers, dropped in some e-liquid, and took my body to Camp Nicotine—right off the Nicotine Valley, USA. Man, legal drugs rock.”
 - NIH: “Kava-containing products have been associated with liver-related injuries, including hepatitis, cirrhosis, and liver failure, in over 25 reports of adverse events in other countries. In the U.S., FDA received a report of a previously healthy young female who required liver transplantation, as well as several reports of liver-related injuries.”
 - Vitamins
 - Advertising claim: “VitaminVape contains vitamin B12. On top of offering a healthier buzz, the all natural ingredient has numerous health benefits, especially for the nervous system and cell development.”
 - FDA in December 2021: “The use of your “B12 VITAMINVAPE” product raises safety concerns for the agency because the ingredients or the impurities in oral inhalation products may trigger laryngospasm or bronchospasm, may be toxic to the tissues in the upper or lower airways, or may be absorbed and exert undesirable systemic effects or organ toxicity.”
- Herbal extracts, essential oils, etc.



Image: Kava Vapes



Image: VitaminVapes sold online in May 2022

Cannabis

- Most online retailers also sell synthetic cannabis
 - CBD [cannabidiol]
 - “CBD does not get you high, but the idea that it’s not psychoactive is something of a misconception. It does change your consciousness... in addition, some CBD products do contain small amounts of ‘THC.’” –*Harvard Health Review*
 - delta-8, delta-10, delta-11 (etc.)
 - The 2018 US Farm Bill legalized industrial hemp with low levels of delta-9
 - delta-derivatives can be sourced from delta-9 found in industrial hemp
 - “The main difference in Delta 8-THC, Delta 9-THC and Delta 10-THC is federal and state legality.” –*delta8us.com*
 - HHC
 - “Like delta 8 THC and delta 10 THC, commercial HHC is made from hemp-derived CBD in a lab through chemical processes. HHC has one major legal advantage over delta 8 and delta 10: it isn’t called ‘THC.’” –*vaping360.com*
 - Largely unregulated, allowing sales where recreational cannabis is illegal
- Sold in vaporizers and as edibles

Image: packages of
K2/Spice



Cannabis use is not necessarily harmless

- Increased access to cannabis is associated with increased consumption
- NIDA estimates that
 - 21-29% of people prescribed opioids misuse them and 8-12% become addicted
 - 30% of people consuming cannabis have a use disorder and 9-17% become addicted
- Marketing mirrors that of tobacco

Images: delta-9 Boom Bestie bubble gum flavor, HHC Canna River Dragon Berry, Delta Bang! Delta-10 Girl Scout Cookies flavor



To be
continued...

- Our team is researching marketing by e-cigarette retailers that have been cited by the FDA
- New proposal: continue research by conducting real-time surveillance of brick-and-mortar stores, online retailers, and social media



Questions?

Image: speech bubbles



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