DISTRICT COURT, CITY AND COUNTY OF DENVER, COLORADO 1437 Bannock Street Denver, CO 80202 STATE OF COLORADO, ex rel. PHILIP J. WEISER, ATTORNEY GENERAL Plaintiff, v. JUUL LABS, INC. Defendant.	DATE FILED: July 7, 2020 10:41 AM FILING ID: EE0C79D82E66A CASE NUMBER: 2020CV32283 ▲ COURT USE ONLY ▲
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COMPLAINT	

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1. Plaintiff, the State of Colorado, upon relation of Philip J. Weiser, Attorney General for the State of Colorado, and acting in his *parens patriae* capacity, by and through undersigned counsel, alleges the following Complaint against Defendant JUUL Labs, Inc. ("JUUL"):

INTRODUCTION

2. From 2015 to the present, JUUL Labs Inc., manufacturer of the JUUL e-cigarette, carried out one of the most reckless, unconscionable, and devastatingly successful marketing campaigns in U.S. history, focused on selling an inherently dangerous and highly addictive product.

3. JUUL's deceptive advertising concealed the highly addictive nature of JUUL's products, downplayed its health risks, falsely suggested that JUUL promotes public health as an alternative to smoking, and unconscionably targeted youth with a message that JUUL is the product for "cool kids." JUUL's deceptive messaging on these fronts created an aggregate false impression amongst consumers, particularly youth, that JUUL is a safe product.

4. In the wake of JUUL's campaign, millions of youth who had never touched a cigarette became addicted to JUUL, a product with five times the addictive nicotine strength of a Marlboro cigarette. By July 2018, Colorado led the nation in youth vaping, with 27% of high school students having vaped in

the past 30 days, almost double the national rate.[1] By September 2018, the U.S. Food and Drug Administration ("FDA") acknowledged that the United States was dealing with a youth vaping "epidemic."[2]

5. Use of the word "epidemic" is not an exaggeration. The National Institute for Drug Abuse, which funds the annual Monitoring the Future survey of youth substance abuse, reported that the one-year increase (2017-2018) in e-cigarette use amongst tenth and twelfth graders was the largest the organization has ever recorded for any substance it has tracked in the past forty-four years.

6. The youth vaping epidemic that JUUL spawned continues to worsen. From 2018 to 2019, the number of U.S. high school students who vaped in the past 30 days doubled. A joint report by the Centers for Disease Control and Prevention and the FDA estimated that five million youths, 27.5% of U.S. high school students, now vape.[3] This represents a dramatic increase from 2017,

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[1] Colorado Department of Public Health and Environment (CDPHE), *2017 Executive Summary, Healthy Kids Colorado Survey* (July 2018), https://www.colorado.gov/pacific/cdphe/hkcs.

[2] U.S. Food and Drug Administration, *Statement from FDA Commissioner Scott Gottlieb, M.D. on new steps to address epidemic of youth-cigarette use* (September 11, 2018), https://www.fda.gov/news-events/press-announcements/statement-fda-commissioner-scott-gottlieb-md-new-steps-address-epidemic-youth-e-cigarette-use.

[3] U.S. Food and Drug Administration, *Youth Tobacco Use: Results from the National Youth Tobacco Survey*, https://www.fda.gov/tobacco-products/youth-and-tobacco/youth-tobacco-use-results-national-youth-tobacco-survey (content current as of November 18, 2019).

when only 11.7% of U.S. high school students reported current use of e-cigarettes.[4]

7. JUUL was, and is, the driving force behind these statistics. JUUL created the youth vaping epidemic in Colorado and throughout the country. A study published in 2020 in the Journal of the American Medical Association, Pediatrics, reported a one-third increase for "current" JUUL use, also referred to as "JUULing," from 2018 to 2019.[5]

8. Faced with increased governmental response to the youth vaping epidemic, the founders of JUUL piously claimed that their mission has always been to help adult cigarette smokers. The facts belie this assertion. A review of JUUL's marketing shows that, from the beginning, JUUL has been solely motivated by profit, and has indiscriminately marketed JUUL to anyone it believed would buy its dangerous product. JUUL prioritized the youth market and acted with reckless indifference to addicting non-smoking teens.

9. The rise of JUUL came after states and others made significant progress in reducing youth smoking. In 1996-1997, 28% of adolescents reported smoking cigarettes, but by 2018 only 5% of adolescents reported smoking

[4] Teresa W. Wang et. al., *Tobacco Product Use Among Middle and High School Students — United States, 2011–2017* (2018), https://www.cdc.gov/mmwr/volumes/67/wr/mm6722a3.htm?s_cid=mm6722a3_w.
[5] Donna M. Vallone et al., *Electronic Cigarette and JUUL Use Among Adolescents and Young Adults*, JAMA Pediatrics, (Jan. 21, 2020), doi:10.1001/jamapediatrics.2019.5436.

cigarettes.[6] In a remarkably short time, JUUL's efforts have nearly wiped out these gains.

10. With reckless indifference to the health of youth across the United States and Colorado, JUUL erased the gains of reduced youth smoking by harnessing the power of social media to generate sales of a highly addictive and dangerous product. By the end of 2018, JUUL controlled 76% of the e-cigarette market with total annual sales of 1.3 billion dollars.[7]

11. In devising their marketing program, JUUL had the benefit of hindsight learned from the experience of the tobacco industry. Recognizing that e-cigarettes were relatively new to the mass public, JUUL believed it had a unique "freedom to operate," essentially unhindered by the legal or regulatory pressures imposed on the cigarette industry. JUUL knew that those pressures would grow as the full health impacts of youth addiction came to light, just as they had done in the cigarette industry. But they also knew, again from the experience of the tobacco industry, that once a significant portion of the country's youth were addicted, e-cigarette usage

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[6] U.S. Department of Health and Human Services, Office of Population Affairs, *Adolescents and Tobacco: Trends*, https://www.hhs.gov/ash/oah/adolescent-development/substance-use/drugs/tobacco/trends/ (last visited Jan. 8, 2020).

[7] A. LaVito, *Popular e-cigarette JUUL's sales have surged almost 800 percent,* CNBC (July 2, 2018), https://www.cnbc.com/2018/07/02/juul-e-cigarette-sales-have-surged-over-the-past-year.html; Olivia Zaleski and Ellen Huet*, JUUL Expects Skyrocketing Sales of $3.4 Billion, Despite Flavored Vape Restrictions*, Bloomberg (Feb. 22, 2019), https://www.bloomberg.com/news/articles/2019-02-22/juul-expects-skyrocketing-sales-of-3-4-billion-despite-flavored-vape-ban.

would continue for decades even in the face of aggressive legal and regulatory countermeasures.

12. JUUL further fueled the vaping epidemic by representing to the public that its addictive product was rigorously tested and safe. At the same time, JUUL understood and acknowledged the numerous risks and dangers of e-cigarettes, including:

- *Because e-cigarettes and ENDS devices were recently developed, the medical profession has not had a sufficient period of time to study the long-term health effects of e-cigarette use.*
- *The use of e-cigarettes may pose health risks that outweigh their potential benefits.*
- *According to the FDA, e-cigarettes and other ENDS devices may contain ingredients that are known to be toxic to humans and may contain other ingredients that may not be safe.*
- *Because clinical studies about the safety and efficacy of e-cigarettes have not been submitted to the FDA, consumers currently have no way of knowing whether e-cigarettes are safe for their intended use; what types or concentrations of potentially harmful chemicals are found in these products; or how much nicotine is being inhaled.*
- *Additionally, e-cigarettes may be attractive to young people and may lead them to try other tobacco products, including conventional cigarettes that are known to cause disease.*

13. By deliberately failing to disclose these dangers, JUUL sent a message to youth that its product was neither harmful nor addictive. As a direct result of JUUL's reckless marketing to youth, misrepresentations about its nicotine content, and failure to disclose the health risks associated with its product, Colorado now confronts the public nuisance of a youth vaping epidemic created by JUUL.

14. The Attorney General of the State of Colorado brings this action pursuant to the Colorado Consumer Protection Act, C.R.S. §§ 6-1-101 *et seq*. to enjoin and restrain JUUL Labs, Inc. from engaging in unlawful deceptive trade practices and to prevent the undue proliferation of the scourge of e-cigarettes, for restitution and damages to injured consumers and the State of Colorado, for statutorily mandated civil penalties, for disgorgement, and other relief as provided in the Colorado Consumer Protection Act and pursuant to Colorado law.

PARTIES

15. Philip J. Weiser is the duly elected Attorney General of the State of Colorado and is authorized under the Colorado Consumer Protection Act ("CCPA"), C.R.S. §§ 6-1-103, 107, 110, 112, to investigate deceptive trade practices and to enforce the provisions of the CCPA on behalf of the entire State of Colorado, seeking deterrence, punishment, and protection of the public at large. The Attorney General also brings this action in his *parens patriae* capacity, as Colorado has a quasi-sovereign interest in the health and well-being

of all its citizens, particularly its youth, and has been directly and significantly impacted by the Defendant's misconduct. The State of Colorado, its institutions, and its citizens have suffered damages, losses and irreparable injury, and will continue to suffer damages, losses, and such injury as a direct and proximate result of the Defendant's misconduct described herein.

16. Defendant JUUL Labs, Inc. (formerly known as "PLOOM Labs, Inc." and "PAX Labs, Inc.," and referred to as "JUUL") is a Delaware corporation, with its principal place of business in San Francisco, California. JUUL conducts business in the State of Colorado and is registered with the Colorado Secretary of State as a foreign entity.

JURISDICTION AND VENUE

17. Pursuant to C.R.S. §§ 6-1-103 and 6-1-110(1), this Court has jurisdiction to enter appropriate orders prior to and following an ultimate determination of liability.

18. The violations alleged herein occurred, in part, in Denver, Colorado. Therefore, venue is proper in Denver County, Colorado, pursuant to C.R.S. § 6-1-103 and C.R.C.P. 98.

RELEVANT TIMES

19. The conduct that gives rise to the claims for relief contained in this Complaint began in 2015 and has been ongoing through the present.

20. This action is timely brought pursuant to C.R.S. § 6-1-115 in that it is brought within three years of the date on which false, misleading,

unconscionable, unfair, or deceptive acts or practices occurred or were discovered and said practices are ongoing.

PUBLIC INTEREST

21. Through its unlawful business practices, Defendant JUUL has deceived and misled thousands of Colorado consumers, causing harm to both the consumers and the State that will continue into the future. Defendant JUUL's conduct has significantly impacted, and will continue to significantly impact, the public as actual or potential consumers. Therefore, these legal proceedings are in the public interest and are necessary to safeguard citizens from Defendant JUUL's unlawful business practices.

FACTUAL ALLEGATIONS

I. JUUL'S MARKETING UNCONSCIONABLY TARGETS YOUTH.

A. JUUL: E-cigarette basics

22. JUUL is the leading brand of e-cigarette. E-cigarettes, also known as electronic nicotine delivery systems ("ENDS"), operate by producing an aerosol from a liquid solution that typically contains nicotine, flavoring, and a humectant, such as propylene glycol. The liquid solution is often referred to as an "e-liquid." The e-liquid is heated, then released as an aerosol, and then inhaled by the user.[8]

[8] Truth Initiative, *Action Needed: E-Cigarettes* (Nov. 11, 2019), https://www.truthinitiative.org/sites/default/files/media/files/2019/11/Truth-Initiative-E-Cigarette-Fact-Sheet-Nov-11.pdf.

23. JUUL was introduced to the market in 2015 by PAX Labs, Inc., a company founded by JUUL's inventors, James Monsees and Adam Bowen.[9] In 2017, JUUL Labs, Inc. was spun off as a separate company to focus solely on e-cigarettes.[10]

24. When JUUL entered the e-cigarette market in 2015, it sought to separate itself from the then operating brands of e-cigarettes by delivering a much higher addictive nicotine content. To achieve this goal, JUUL developed a nicotine salt formulation that allows higher concentrations of addictive nicotine to be delivered with less harshness.[11] These nicotine salts also allow the JUUL product to deliver nicotine to the bloodstream up to 2.7 times faster than other e-cigarettes.[12]

25. JUUL delivers this nicotine salt formulation in self-contained disposable "pods."[13] These pods are used in conjunction with the JUUL "device."

26. The JUUL device has a sleek, high-tech design that resembles a USB flash drive and can easily be recharged through a laptop USB port.[14] The

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[9] Reuters, *Timeline: Significant events in the history of JUUL* (Sept. 25, 2019), https://www.reuters.com/article/us-juul-history-timeline/timeline-significant-events-in-the-history-of-juul-idUSKBN1WA2LI.
[10] *Id.*
[11] Truth Initiative, *Action Needed: E-Cigarettes* (Nov. 11, 2019), https://www.truthinitiative.org/sites/default/files/media/files/2019/11/Truth-Initiative-E-Cigarette-Fact-Sheet-Nov-11.pdf.
[12] *Id.* at 10.
[13] Truth Initiative, *Action Needed: E-Cigarettes* (Nov. 11, 2019), https://www.truthinitiative.org/sites/default/files/media/files/2019/11/Truth-Initiative-E-Cigarette-Fact-Sheet-Nov-11.pdf.
[14] *Id.*

JUUL device has been described as "stealthy" because its resemblance to a flash drive makes it difficult for parents and teachers to recognize.[15] Previous generations of e-cigarettes looked like actual tobacco cigarettes, or were large and conspicuous.[16]

JUUL device, on the left, next to a pair of USB flash drives.[17]

27. JUUL developed a line of eight flavored e-liquids for use with the JUUL device: Mango, Fruit Medley, Crème Brûlée, Cool Cucumber, Cool Mint,

[15] Robert K. Jackler, *The Role of the Company in the JUUL Teen Epidemic*, Testimony for House Subcommittee on Economic and Consumer Policy (Jul. 24, 2019), https://docs.house.gov/meetings/GO/GO05/20190724/109844/HHRG-116-GO05-Wstate-JacklerR-20190724.pdf.

[16] Truth Initiative, *E-Cigarettes* (Nov. 11, 2019), https://www.truthinitiative.org/sites/default/files/media/files/2019/11/Truth-Initiative-E-Cigarette-Fact-Sheet-Nov-11.pdf.

[17] American Lung Association, *What Parents Should Know about E-cigarettes and Kids,* https://www.lung.org/stop-smoking/smoking-facts/e-cigarettes-parents.html

Classic Menthol, Virginia Tobacco, and Classic Tobacco.

Various flavors of JUUL sold in a four-pod multipack.[18]

28. JUUL sells its products in Colorado through retail stores and through e-commerce. JUUL has thousands of authorized retailers across the state, including several hundred authorized retailers in Denver. JUUL has completed millions of transactions through Colorado retail stores.

[18] Mary Hanbury, *Flavored JUUL pods will no longer be sold in retail stores-but here's where you can still buy them*, Business Insider (Nov. 17, 2018), https://www.businessinsider.com/juul-pods-banned-where-to-buy-2018-11

29. Between 2015 and 2019, JUUL processed and shipped thousands of non-retail orders to Colorado locations, including thousands of e-commerce orders and warranty replacements.

30. JUUL's significant Colorado revenues mirror JUUL's global dominance of the e-cigarette market. JUUL's Colorado revenues increased exponentially in 2017 and exploded in 2018. JUUL's 2019 Colorado revenues through August indicate that JUUL was on track to achieve substantial year-over-year growth for a fourth consecutive year.

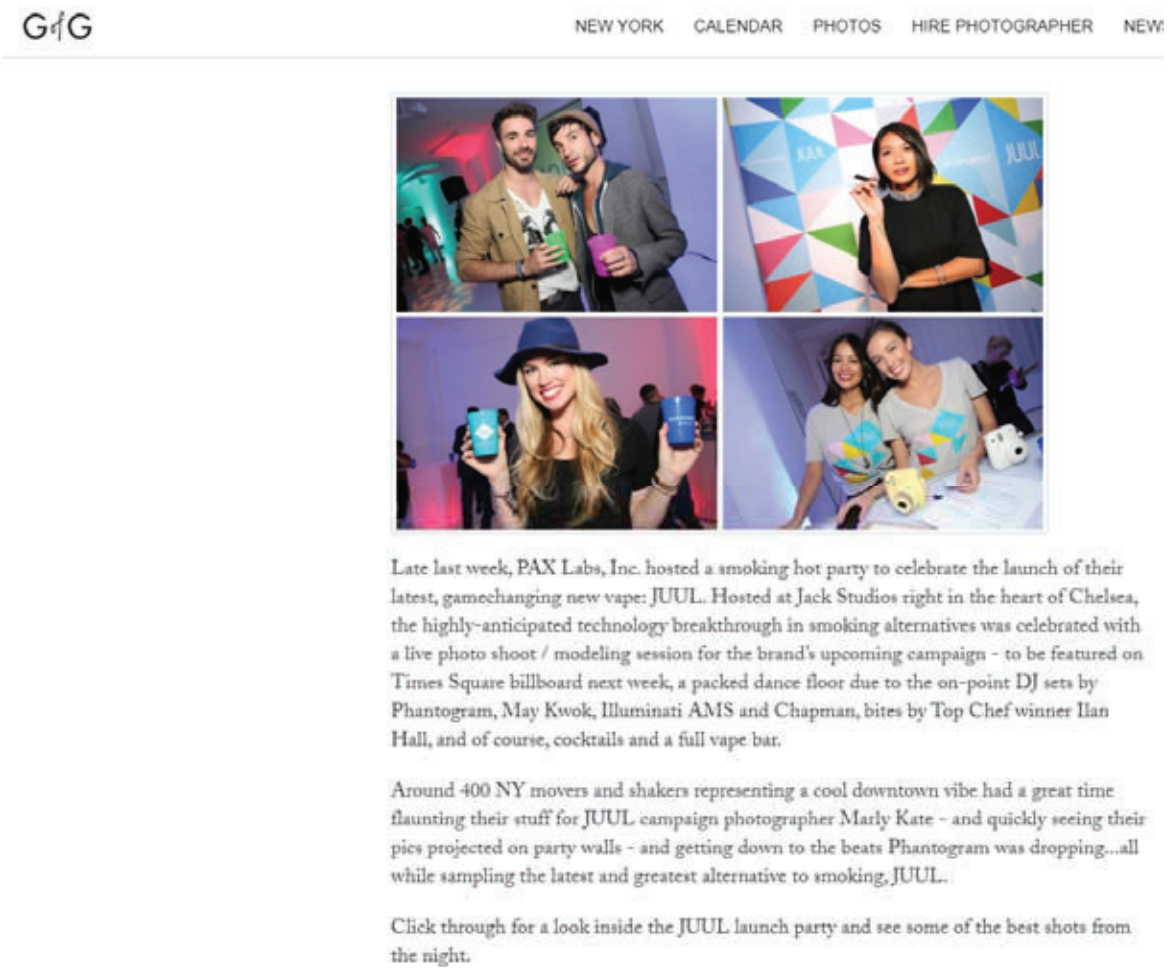
B. JUUL has unconscionably targeted youth, with an advertising emphasis on making JUUL the product for "cool kids."

31. Although JUUL denies that it ever intended its product to appeal to young people, JUUL's marketing, social media engagement, and internal communications contradict this assertion. JUUL believed it had a "freedom to operate," a freedom to market to youth in ways that traditional tobacco products could not. The marketing concept of "cool kids" has been the most pervasive theme in JUUL's advertising and messaging since JUUL's inception. From 2015 to the present, JUUL has marketed itself to youth as the product for "cool kids."

32. To kick off its 2015 national marketing campaign, JUUL held launch parties in Los Angeles and New York City. JUUL chose those cities specifically because they "are two of the most trend-setting cities in the US" and JUUL believed its advertising in those cities would be "amplified across the

nation." The launch parties included musical acts and other guests whom JUUL described in internal communications as "models and cool kids."

33. In a paid publicity release in connection with the launch parties, JUUL posted pictures of stylish young people at its "smoking hot party" featuring "on-point DJ sets," and described the attendees as "400 NY movers and shakers representing a cool downtown vibe."[19]



G/G NEW YORK CALENDAR PHOTOS HIRE PHOTOGRAPHER NEW

Late last week, PAX Labs, Inc. hosted a smoking hot party to celebrate the launch of their latest, gamechanging new vape: JUUL. Hosted at Jack Studios right in the heart of Chelsea, the highly-anticipated technology breakthrough in smoking alternatives was celebrated with a live photo shoot / modeling session for the brand's upcoming campaign - to be featured on Times Square billboard next week, a packed dance floor due to the on-point DJ sets by Phantogram, May Kwok, Illuminati AMS and Chapman, bites by Top Chef winner Ilan Hall, and of course, cocktails and a full vape bar.

Around 400 NY movers and shakers representing a cool downtown vibe had a great time flaunting their stuff for JUUL campaign photographer Marly Kate - and quickly seeing their pics projected on party walls - and getting down to the beats Phantogram was dropping...all while sampling the latest and greatest alternative to smoking, JUUL.

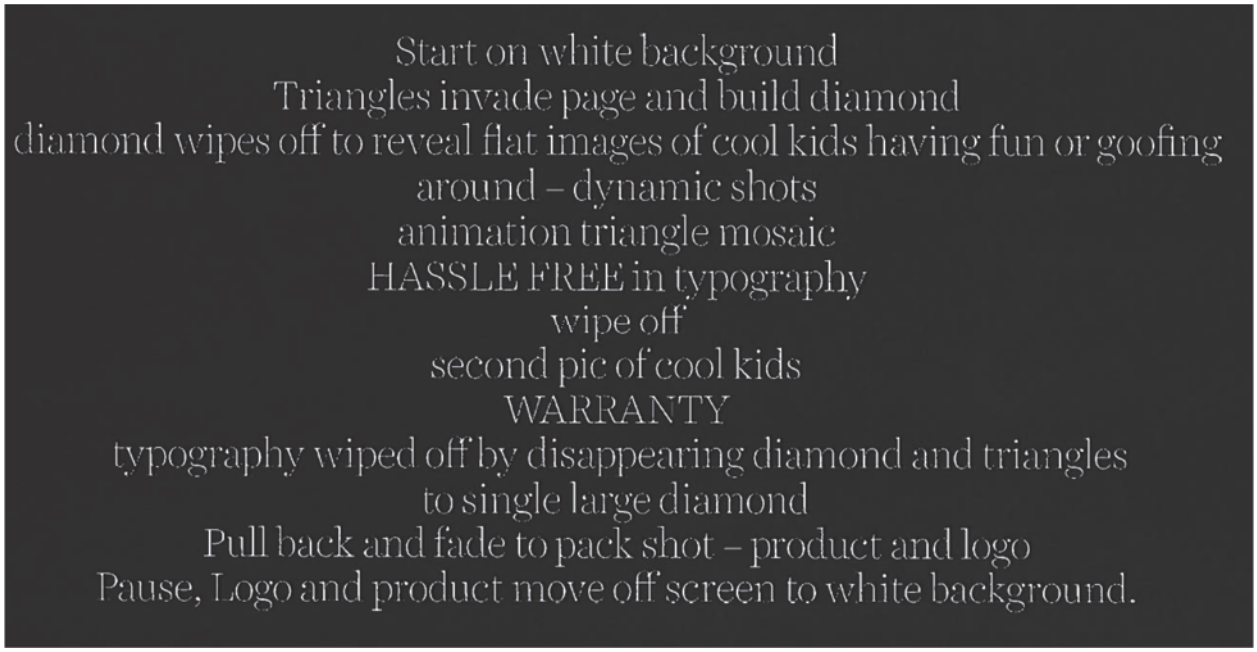
Click through for a look inside the JUUL launch party and see some of the best shots from the night.

JUUL publicity release, June 6, 2015.[20]

[19] *We Got #VAPORIZED: Inside the JUUL Launch Party,* Guest of a Guest (June 16, 2015), https://guestofaguest.com/new-york/events/we-got-vaporized-inside-the-juul-launch-party

[20] *Id.*

34. At the same time as the launch parties, JUUL began creating its first advertising videos and photo sequences for use in marketing displays. The storyboards for these initial JUUL advertising videos called for "images of cool kids having fun or goofing around."



35. The models JUUL hired to play the "cool kids" were clearly young and the videos featured "cool kids" dancing in front of a colorful backdrop while vaping. The youth-targeted advertising contains no warnings or disclosures that JUUL contains the addictive chemical nicotine.

Screenshots from JUUL advertising video.

36. Seeking to make the most of these "cool kid" images, JUUL also displayed them on a massive multi-panel electronic billboard space in New York City's Times Square, on its website, and in its marketing emails.[21]

[21]Stanford University, Research into the Impact of Tobacco Advertising (SRITA), *JUUL,* http://tobacco.stanford.edu/tobacco_main/images_pods.php?token2=fm_pods_st685.php&token1=fm_pods_img37924.php&theme_file=fm_pods_mt068.php&theme_name=JUUL&subtheme_name=Times%20Square.

JUUL's Times Square billboards 2015.[22]

37. After these launch events, JUUL began promoting its product at promotional events all across the country, including Colorado. JUUL hired young models to work as "brand ambassadors" at these promotional events and pass out free samples of JUUL products.

38. JUUL instructed the brand ambassadors to "[i]dentify people who fit the JUUL demographic and who may want to try/receive JUUL (smokers, cool kids, fun people, etc.)."

39. As part of this quest to target "cool kids," JUUL sent its brand ambassadors to Colorado. In September 2015, JUUL carried out over 60 promotional events at convenience and tobacco store parking lots across the Denver Metro area, including locations in Denver, Boulder, Aurora and Littleton. At these September promotional events, JUUL's brand ambassadors

[22] *Id.*

convinced hundreds of Colorado consumers to stop, listen to JUUL's pitch, inhale the dangerous product, and then provide JUUL with feedback.

40. JUUL gathered numerous pieces of data from its Colorado promotional events, including the approximate ages of consumers willing to try the samples, preferred flavors, and prior smoking experience.

41. For example, at a September 4, 2015 promotional event at a Circle K convenience store in Littleton, JUUL estimated that the *average* age of these consumers was 21-24 years old. JUUL estimated that between 50-75% of the consumers at this event were non-smokers/first-time smokers.

42. JUUL also recorded "memorable quotes" and the "biggest complaint" from these Colorado promotional events. JUUL's memorable consumer quotes from Colorado events included: "That's really strong!" and "Tastes like candy." For the biggest complaint, three events reported "made some customers cough."

43. After a September 2, 2015 event in Boulder, JUUL reported that Boulder "consumers commented that the miint flavor was very refreshing, almost like chewing minty gum. The bruule was the favorite overall."[23] For biggest complaint, JUUL noted that "a huge percentage of people in the area did not smoke any type of nicotine or tobacco products at all."

[23] JUUL changed the names of its primary flavors on or around April 1, 2016. JUUL renamed "miint" as "Cool Mint," "fruut" as "Fruit Medley," "bruule" as "Crème Brûlée," and "tabaac" as "Virginia Tobacco."

44. Even though many Boulder consumers did not use tobacco products, JUUL gave out numerous free samples. JUUL estimated that 25-50% of the Boulder consumers who accepted the free samples were non-smoker/first-time smokers.

45. Advertisements featuring "cool kids" using nicotine, and free samples at promotional events, where the target demographic is "cool kids," are precisely the types of advertising that the states and the FDA have long prohibited in their efforts to protect youth from tobacco initiation.

46. The 1998 Tobacco Master Settlement Agreement between the major tobacco companies and 46 states prohibited tobacco companies from directly or indirectly targeting youth, from outdoor advertising, and from giving away free samples at events where minors are present.[24]

47. In 2009, Congress passed the Family Smoking Prevention and Tobacco Control Act ("Tobacco Control Act") which featured specific measures to prevent youth access to tobacco, including prohibitions on event sponsorship and free samples.[25] In 2016, the FDA issued the "Deeming Rule" making e-cigarettes subject to the Tobacco Control Act.[26]

48. In mid-2016, Gal Cohen, JUUL's Head of Scientific and Regulatory Affairs sent an email to JUUL co-founder Adam Bowen, with a summary of the

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[24] Truth Initiative, *Master Settlement Agreement*, https://truthinitiative.org/who-we-are/our-history/master-settlement-agreement (last visited Jan. 8, 2020).
[25] 21 U.S.C.A. Ch. 9, Subch. IX; *see also* 21 CFR § 1140.
[26] Deeming Tobacco Products To Be Subject to the Federal Food, Drug, and Cosmetic Act, 81 Fed. Reg. Reg. 28,973, 28,974-29,020 (May 10, 2016), Codified at 21 C.F.R. pts. 1100, 1140, 1143.

various tobacco advertising laws, including prohibited practices within the federal regulations and the Tobacco Master Settlement Agreement. Analyzing federal regulations, he noted "e-cigarettes don't currently have significant advertising restrictions by FDA."

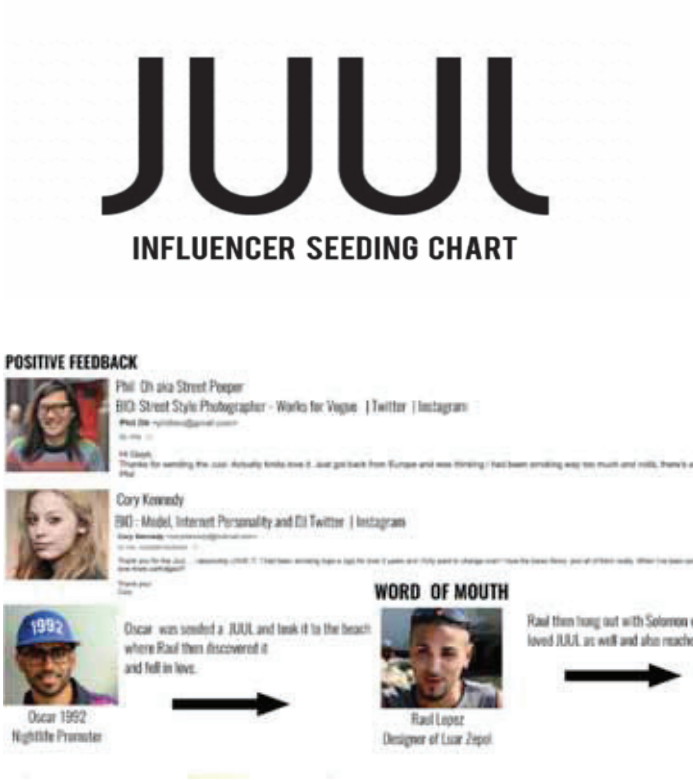
49. Analyzing the Tobacco Master Settlement Agreement, Cohen wrote "not applicable, agreement is restricted to signatory companies, cigarette and smokeless." Cohen concluded this analysis by recommending that JUUL "should consider taking advantage of the FTO," a common business acronym standing for "freedom to operate."

50. JUUL's narrow and misguided analysis explains JUUL's reckless marketing to youth from 2015 to the present. JUUL's analysis, however, failed to consider state consumer protection laws and the unconscionability of targeting youth with advertisements for an addictive product. In embarking on this effort, JUUL attempted to circumvent the combined efforts of public health organizations and government to prevent youth tobacco addiction.

51. JUUL's misguided belief that it could unconscionably target youth in ways that cigarette companies cannot led them to undertake a concerted and effective campaign through social media to make JUUL the product for "cool kids."

JUUL launch party post from Twitter, June 4, 2015.

52. While JUUL posted its own messages on social media, JUUL's long-term marketing strategy was to sow the "seeds" with social media influencers by inviting them to JUUL events, sending them free JUUL starter kits, and using the influencers' "word of mouth" advertising to reach American youth via social media.



53. JUUL's internal documents describe the goal of this influencer campaign to "win over the cool crowd of key influencers, ultimately getting the world talking about JUUL in the press, to their friends on social media."

54. In an internal document circulated ahead of JUUL's launch parties in 2015, JUUL's marketing team wrote that "Word of Mouth Marketing" through influencers is "the most valuable form of marketing." To that end, JUUL targeted 1,500 influencers with "strong networks in fashion, music and entertainment – many of whom have incredibly strong presences in social media with millions of followers."

55. JUUL won over influencers by providing them with free samples and discounts through its VIP Portal and inviting them to trendy events, with

rock music, pop culture and movie themes, including an all-night outdoor slumber party in Los Angeles.[27]

56. JUUL embarked on this campaign and targeted influencers with the purpose and intent of reaching teenagers. Notably, the relevant influencers included people whom teenagers looked to for fashion and lifestyle information on social media platforms like Twitter, Instagram, YouTube, and Snapchat. For JUUL, the strategy of generating nationwide organic social media buzz designed to reach teenagers would continue even after JUUL limited its direct intervention.[28]

57. JUUL's social media strategy succeeded massively. Researchers who analyzed JUUL's social media usage observed that after JUUL opened its Twitter account in 2015, the number of JUUL-related tweets "increased substantially" in 2016, and then "exploded" in 2017.[29] Between January 2015 and December 2017, JUUL sent out 4,800 promotional tweets, and during the same period, the total for all JUUL-related tweets climbed to 366,786.[30]

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[27] Robert K. Jackler et. al, *JUUL Advertising Over its First Three Years on the Market*, Stanford Research into the Impact of Tobacco Advertising, 1-48, 11 Jan. 31, 2019, http://tobacco.stanford.edu/tobacco_main/publications/JUUL_Marketing_Stanford.pdf.
[28] Jidong Huang, PhD et al., *Vaping versus JUULing; how the extraordinary growth and marketing of JUUL transformed the US retail e-cigarette market*, Tobacco Control 2019;28:146-151, https://tobaccocontrol.bmj.com/content/28/2/146.
[29] *Id.*
[30] *Id.*

58. Until October 2017, JUUL sent out these tweets without warning consumers that its product contained nicotine.[31] JUUL knew that its influencer-driven social media campaign would carry JUUL's advertising even further, and without nicotine warnings.

59. JUUL's unfettered "word of mouth" advertising campaign continues through the present and has allowed JUUL to evade the restrictions on traditional tobacco advertising and continue to expand its sales to Colorado youth.

60. In January 2018, JUUL sponsored a "Music in Film Summit" event at the Sundance Film Festival. JUUL set up a trendy lounge and VIP room where celebrities such as Elijah Wood, star of the Lord of the Rings' films, and Nicholas Cage, were photographed in front of a JUUL logo backdrop.[32]

[31] http://tobacco.stanford.edu/tobacco_main/images_pods.php?token2=fm_pods_st660.php&token1=fm_pods_img37964.php&theme_file=fm_pods_mt068.php&theme_name=JUUL&subtheme_name=Twitter.

[32] *Id.*

61. By promoting its product in this way, JUUL seeks to evade advertising restrictions while reinforcing its trendiness. JUUL knows that influencers will post these images without warnings about the product, such as "nicotine is an addictive chemical." Young viewers of JUUL's influencer advertising learn nothing about the celebrity's use of JUUL or addiction to nicotine. JUUL simply pairs hip, trendy celebrities with the JUUL name, knowing numerous youth-oriented influencers will pick up and rebroadcast the images.

C. JUUL's unconscionable marketing to youth wiped out the gains of the Tobacco Master Settlement Agreement.

62. JUUL's targeted advertising to youth, and the strategy of branding JUUL users as "cool kids," has been highly effective. The Truth Initiative, a non-profit public health organization funded through the Tobacco Master Settlement Agreement, reported in 2018 that 15 to 17-year-olds were over sixteen times more likely to use JUUL than 25 to 34-year-olds.[33]

63. JUUL's successful advertising led Robin Koval, the CEO of Truth Initiative, to worry that "E-cigarettes may be turning back the clock on the tremendous progress we've made in the fight against tobacco."[34]

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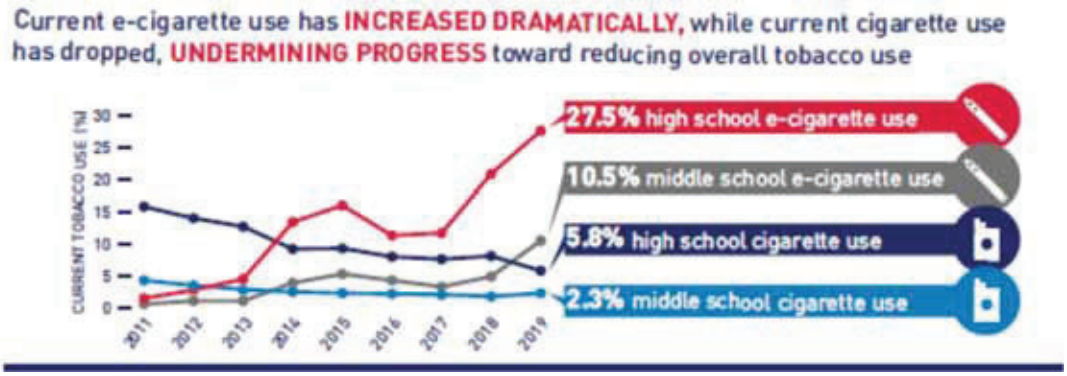
[33] Truth Initiative, *The Youth E-Cigarette Epidemic: 5 Important Things to Know* (Nov. 14, 2018), https://truthinitiative.org/news/youth-e-cigarette-epidemic-5-important-things-to-know.
[34] *Id.*

64. Survey data bear out that fear. In 1996-1997, the percentage of adolescents who reported smoking cigarettes in the past month was 28%. Over the next twenty years, that figure dropped to only 5%.[35] Public health officials were understandably pleased with this remarkable achievement.

65. Public health officials are understandably dismayed that, in just four short years, JUUL's reckless heavy marketing to youth has wiped out all of their gains. The 2019 Youth Tobacco Survey found that 27.5% of high school students had used e-cigarettes in the past month.[36]



2019 Youth Tobacco Survey.

D. JUUL has unconscionably hashtag marketed to youth, while mocking the efforts of youth prevention "crusaders."

66. While public health officials are horrified by the youth vaping epidemic, JUUL has refused to take seriously—let alone acknowledge—its

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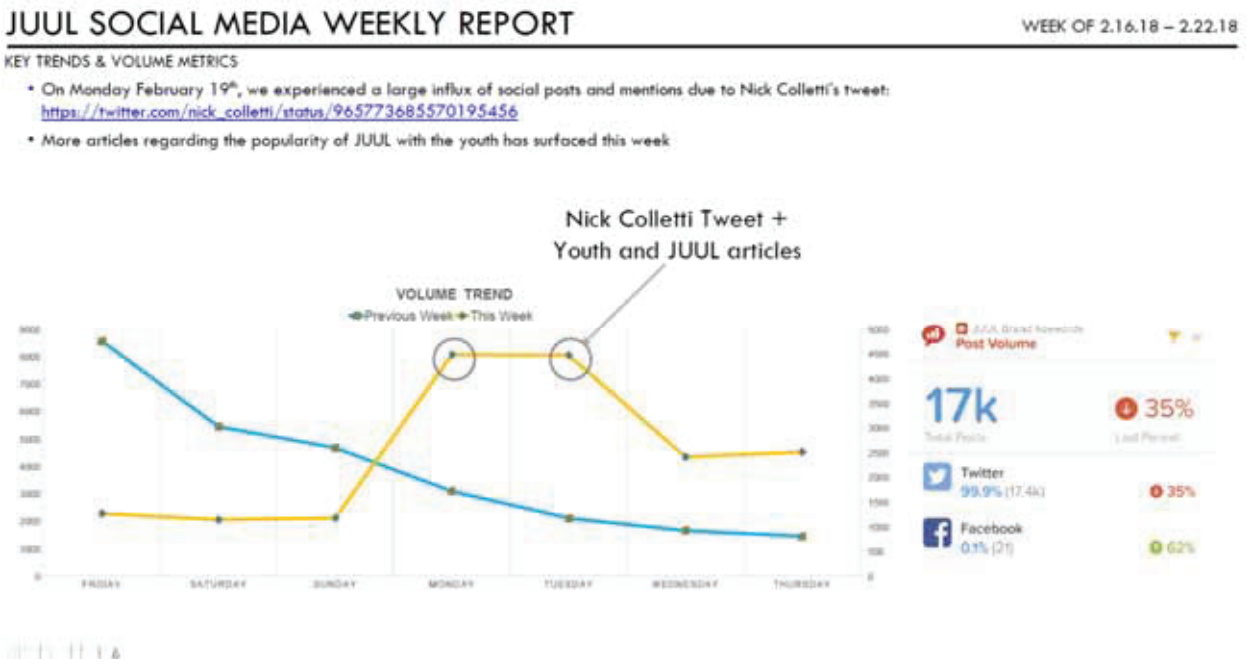
[35] U.S. Department of Health and Human Services, Office of Population Affairs, *Adolescents and Tobacco: Trends*, https://www.hhs.gov/ash/oah/adolescent-development/substance-use/drugs/tobacco/trends/ (last visited Jan. 8, 2020).
[36] Truth Initiative, *Action Needed: E-Cigarettes* (Nov. 11, 2019), https://www.truthinitiative.org/sites/default/files/media/files/2019/11/Truth-Initiative-E-Cigarette-Fact-Sheet-Nov-11.pdf.

dangerous impact on teenagers. JUUL employees coined the term "youth prevention crusaders" to mock anyone who expressed concern about the effects of JUUL on youth.

67. While mocking "youth prevention crusaders," JUUL celebrated viral social media activity that generated buzz for its product, particularly in ways that appealed to young people.

68. In internal social media reports, JUUL highlighted viral social media "mentions," including reports of actor Kit Harrington and musician Chance the Rapper photographed carrying JUUL products, a photo of a man who tattooed a photo of a JUUL device on his forearm, and a viral tweet by a "producer, rapper, and internet personality known as 'Yung Turd,'" who had 463,000 followers on Twitter.

69. JUUL did not merely celebrate when an influencer made positive statements about JUUL, it analyzed the social media response in detail. For the Yung Turd (*aka* influencer Nick Colletti) tweet, JUUL's detailed analysis concluded that Yung Turd's singular tweet led to a "large influx of social posts and mentions" across various social media platforms:



70. While expressing concern and repeating its refrain that JUUL is a product for adult smokers in official public statements, JUUL excitedly continued to track and amplify the social media buzz it sought to generate among youths. JUUL pushed forward with social media targeted at influencing youth behavior.

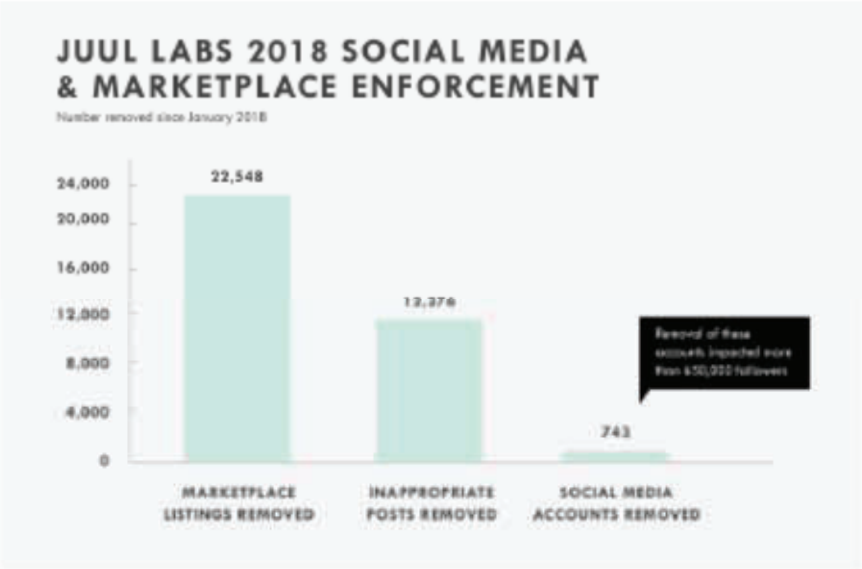
71. Twitter users skew young, and JUUL was aware that its own Twitter followers were young. A 2019 study sponsored by the Truth Initiative

estimated that 44.9% of all individual Twitter users following @JUULvapor were between the age of 13 and 17, and 80% were under 21.[37]

72. On November 13, 2018, JUUL announced that it was "exiting" its social media accounts in order to "remove ourselves entirely from participation in the social conversation."[38] JUUL claimed that it was working with social media platforms to remove "inappropriate" posts.[39] But this effort came after years of aggressive use of social media to promote its products, without accurate

[37] Annice E. Kim, PhD et al., *Estimated Ages of JUUL Twitter Followers,* JAMA Pediatr. 2019;173(7):690-692. (May 20, 2019), https://jamanetwork.com/journals/jamapediatrics/article-abstract/2733855.
[38] *JUUL Labs Action Plan*(November 13, 2018), https://newsroom.juul.com/juul-labs-action-plan/.
[39] *Id.*

information or warnings.



We have asked Facebook, Instagram, Twitter, and Snapchat for their assistance in policing unauthorized, youth-oriented content on their platforms. We asked that each platform prohibit the posting of any content that promotes the use of cigarettes or e-cigarettes by underage users. The problem of combating social media's negative influence on underage vaping is larger than simply removing the JUUL Labs social media accounts, and it can only be solved with the assistance of these companies. The solution to combat underage use requires a strong effort on both of our ends, and we are eager to work with these social platforms to solve these issues.

We will continue to monitor, report, and rapidly remove youth-oriented social media content from third-parties or users.

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73. Internal JUUL documents show that JUUL had always closely monitored the use of its name on social media and the use of JUUL-related hashtags, including #juul, #juuling, #juullife, #juulmoment, #juulpod, and #juulvapor. While acting publicly concerned about youth prevention and touting its social media takedowns, JUUL's documents show that it deliberately chose

[40] *Id.*

not to enforce its trademark on "fan" sites and deliberately allowed use of #juulmoment on Instagram to carry its advertising message, even after this claimed disengagement from social media.

74. In a 2018 email discussing which social media posts to remove, JUUL's Brand Protection Department informed its enforcement vendor that JUUL did not want to have #juulmoment posts removed:

> For example, if it is #juul #juulvapor #juulpods #juullabs, we would want to have those removed. [H]owever, as a company we encourage people to use the hashtag #juulmoment to engage, and some fan sites we do not want to remove all hashtags that include JUUL.

75. No company is more aware than JUUL that social media is still the number one avenue for marketing to youth. Amongst the major platforms, Instagram is the overall favorite, with 72% of U.S. teens ages 13 to 17 using Instagram.[41] Instagram use decreases dramatically by age, with 71% of those 18-24 years old using the platform compared to only 40% for ages 30-49 and 16% for of U.S. adults over 50.[42]

76. JUUL's internal records show that 70% of the followers that JUUL gained across Facebook, Twitter, and Instagram from March 2015 to June 2018 were on Instagram.

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[41] Monica Anderson and Jingjing Jiang, *Teens, Social Media & Technology 2018*, Pew Research Center (May 31, 2018), https://pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018.

[42] Aaron Smith and Monica Anderson, *Social Media Use in 2018*, Pew Research Center (Mar. 1, 2018), https://pewresearch.org/internet/2018/03/01/social-media-use-in-2018.

77. Just as Instagram use skews towards youth, the content of Instagram hashtags that incorporate JUUL's brand name also skew towards youth. In a 2018 study of 14,338 JUUL posts by 5,201 unique users of JUUL's Instagram account, 55% of the JUUL posts contained youth-oriented content.[43]

78. JUUL always intended its influencer campaign to grow organically, without JUUL's fingerprints, and that is precisely what happened when JUUL claimed to have formally "exited" social media. A 2019 review of #juul posts determined that #juul posting continued to increase significantly even after JUUL officially halted its direct promotional posts. During the three and a half years that JUUL was active on social media (June 4, 2015 to November 13, 2018) over a quarter of a million posts appeared. In the eight months after JUUL stopped its social media postings, community posting doubled to over half a million.[44] The seeds sown by JUUL had grown as intended.

79. By encouraging people to post to #juulmoment on Instagram, and not enforcing its trademark to stop the use of other JUUL references, JUUL continues to market its product towards youth and reinforce that it is still the product for "cool kids." JUUL's 2020 Instagram #juulmoment marketing (exemplified by the images below) demonstrates that JUUL continues to target youth and continues to promote itself as the product used by "cool kids."

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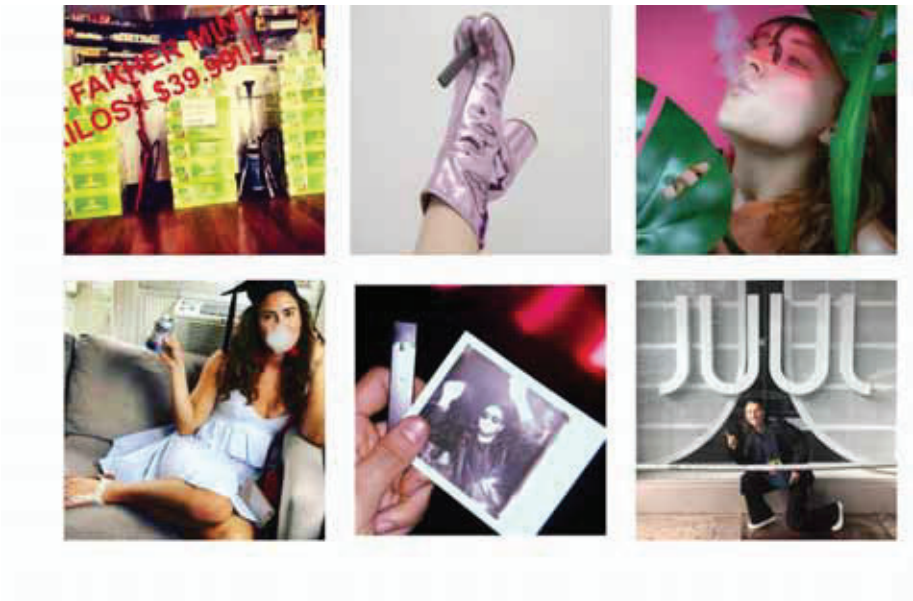
[43]Czaplicki L, Kostygina G, Kim Y, et al. Characterizing JUUL-related posts on Instagram. *TobControl* 2019. doi: 10.1136/tobaccocontrol-2018-054824. [Epub ahead of print].

[44] Robert K. Jackler et. al*, Rapid Growth of JUUL Hashtags after the Company Ceased Social Media Promotion*, Stanford Research into the Impact of Tobacco Advertising (July 22, 2019), http://tobacco.stanford.edu/tobacco_main/publications/Hashtag_JUUL_Project_7-22-19F.pdf.



Screenshots of #juulmoment on Instagram, February 8, 2020.

II. JUUL HAS ATTRACTED YOUTH WITH ITS RECKLESS FOCUS ON FLAVORS.

80. In addition to its efforts to establish JUUL as part of the "cool kids" lifestyle, JUUL created flavored e-cigarette products that appealed to youth. JUUL's e-liquids come in an assortment that includes many sweet and fruity flavors.[45] JUUL offered eight flavors in the United States, including Mango, Fruit Medley, Crème Brûlée, Cool Cucumber, Cool Mint, Classic Menthol, Virginia Tobacco, and Classic Tobacco.[46]

[45] Truth Initiative, *Behind the Explosive Growth of JUUL* (Jan. 3, 2019), https://truthinitiative.org/news/behind-explosive-growth-juul.
[46] Robert K. Jackler et. al, *JUUL Advertising Over its First Three Years on the Market*, Stanford Research into the Impact of Tobacco Advertising, 1-48, 11 Jan. 31, 2019, http://tobacco.stanford.edu/tobacco_main/publications/JUUL_Marketing_Stanford.pdf.

81. Studies have shown that sweet-tasting flavors of tobacco products are particularly appealing to youth and young adults.[47] That is why in 2009, the FDA banned the use of flavors in cigarettes, except for menthol.[48]

82. Internal communications show that JUUL was well aware of the scientific research proving that flavored products attract youth.

83. JUUL's own internal analyses demonstrate an awareness that flavored products appeal to non-smokers. In satisfaction surveys of its users, flavors like Cool Cucumber, Crème Brûlée, and Cool Mint routinely outperformed JUUL's tobacco-flavored products, which appealed primarily to smokers. To high-level JUUL personnel, these results were unsurprising, with one noting that she "wouldn't expect most existing JUUL users to love tobacco flavor."

84. JUUL knew that its flavored products appealed to youth. When confronted in 2016 with a University of Cambridge study that concluded that advertisements for flavored e-cigarette products might encourage youth vaping, JUUL worked with a public relations firm to develop rapid response talking

[47] U.S. Food & Drug Administration, *Menthol and Other Flavors in Tobacco Products*, https://www.fda.gov/tobacco-products/products-ingredients-components/menthol-and-other-flavors-tobacco-products (last visited Jan. 10, 2020).
[48] *Id.*

points to "discredit" the study.

On Thu, Jan 14, 2016 at 9:20 PM, Sarah Richardson <sarah@pax.com> wrote:
Hi Matt,

Basically, Gal's read is that the study didn't find what they were looking for, so they kept massaging their analysis until they got an effect which the study wasn't designed to clearly explore. All the study does is suggest some future hypotheses, but Gal says he wouldn't conclude anything except that they showed that exposure to 12 ads (flavored or unflavored) doesn't significantly impact kids' perception of smoking / e-cigs. Hopefully that helps!

Feel free to reach out if there's any way we can help further - Gal's direct line is (650) 284-9610 if you have any questions in the morning. Thanks again for looping us in, much appreciated!

S

On Thu, Jan 14, 2016 at 3:08 PM, Matt Sheldon <MSheldon@pondel.com> wrote:

Thank you. That works. Study attached for Gal. Looking just to discredit the study itself, besides the fact that its prelimary, I think asking kids if its 'attractive', 'fun' or 'cool' is biased in the first place. I think I have rest of the messaging down.

Matt Sheldon
Vice President

PondelWilkinson Inc.

1880 Century Park East, Suite 350, Los Angeles, CA 90067

85. In early 2018, JUUL's Chief Administrative Officer Ashley Gould wrote an email to co-founder James Monsees, CEO Kevin Burns, JUUL's board of directors, and others outlining a framework for responding to studies regarding youth and e-cigarettes. Ms. Gould's approach included building out JUUL's "rapid response" capabilities, "[d]ebunk[ing] the studies . . . ideally in coordination with independent researchers," stating publicly that JUUL "agree[s] that youth should not use" its products, and highlighting the number of adults who have switched from combustible cigarettes to JUUL.

86. Survey data and anecdotal evidence show that teens preferred JUUL's sweet or minty flavors over its tobacco flavors. In national surveys conducted in 2018 by the Truth Initiative, 29% of teens cited the variety of

flavors as the reason for their e-cigarette use[49] and 43% of middle and high school students, who reported having ever used an e-cigarette, cited appealing flavors as the reason.[50]

87. High school junior Stephanie Aquino states, "If the flavors weren't fruit and things I like, I wouldn't JUUL. I personally hate the tobacco flavor."[51]

88. Belatedly, and only in response to public health officials' criticism, as well as litigation and investigations like the one that preceded this filing, JUUL announced on November 13, 2018 that it would suspend the sale of most of its flavored e-cigarette pods.[52] On October 17, 2019, JUUL announced it would temporarily halt online sales of mango, crème, fruit and cucumber flavored pods, but not mint or menthol.[53]

89. On November 5, 2019, the National Institute on Drug Abuse released results from a study that asked students about their JUUL flavor preferences. Among both tenth and twelfth graders, mint (47% / 44%) was the

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[49] Truth Initiative, *Behind the Explosive Growth of JUUL* (Jan. 3, 2019), https://truthinitiative.org/news/behind-explosive-growth-juul.
[50] *Id.*
[51] Truth Initiative, *The Youth E-Cigarette Epidemic: 5 Important Things to Know* (Nov. 14, 2018), https://truthinitiative.org/news/youth-e-cigarette-epidemic-5-important-things-to-know.
[52] Sheila Kaplan and Jan Hoffman, *JUUL Suspends Selling Most E-Cigarette Flavors in Stores,* New York Times, (Nov. 13, 2018), https://www.nytimes.com/2018/11/13/health/juul-ecigarettes-vaping-teenagers.html
[53] *Sheila Kaplan, JUUL Suspends Online Sales of Flavored E-Cigarettes*, New York Times, (Oct. 17, 2019), https://www.nytimes.com/2019/10/17/health/vaping-juul-e-cigarettes.html.

most popular flavor, followed by mango (24% / 27%). Among eighth graders, mango was most popular at 34%, followed by mint at 29%.[54]

90. On November 7, 2019, JUUL announced that it would discontinue the sale of mint flavored JUUL.[55]

91. On the surface, it might appear that JUUL was simply a victim of its own popularity and, that given the information that youth were attracted to flavors, JUUL opted to do the right thing. JUUL, however, was no novice to the regulatory environment and was aware that both the FDA and Congress had warned the e-cigarette industry in 2014, prior to the launch of JUUL, that flavored e-cigarettes were a gateway to youth initiation with tobacco and were highly addictive.

92. JUUL's Head of Scientific and Regulatory Affairs, Gal Cohen, has held his role since joining JUUL's predecessor company, PLOOM, in 2014. In a June 18, 2014 email to JUUL co-founder Adam Bowen, Cohen reported:

> I just sat through the Senate hearing where Barbara Boxer raked Blu and Njoy over the coals for their flavors . . . . The perception that they are kid baiting is a big deal regardless of whether its [sic] true or not. She has an issue with vanilla and cherry crush, let alone whatever a**hole companies are putting out gummy bear flavor.

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[54] National Institute on Drug Abuse, *NIH-Funded Study Finds Teens Prefer Mint and Mango Vaping Flavors* (2019, November 5), https://www.drugabuse.gov/news-events/news-releases/2019/11/nih-funded-study-finds-teens-prefer-mint-mango-vaping-flavors.

[55] Sheila Kaplan, *Juul Ends E-Cigarette Sales of Mint-Flavored Pods*, New York Times (Nov. 7, 2019), https://www.nytimes.com/2019/11/07/health/vaping-juul-mint-flavors.html.

93. JUUL's internal communications consistently showed that rather than heed scientific research, which showed that flavored products attract youth, JUUL sought to discredit it to protect its profits.

III. JUUL MARKETS TO YOUTH WHILE HIDING ITS ULTRAHIGH NICOTINE CONTENT.

A. The nicotine in JUUL has a powerful adverse effect on adolescent brains.

94. Nicotine is an addictive chemical that is difficult to quit. The repeated use of JUUL to feed the addiction leads to greater JUUL profits. Nicotine meets the established criteria for a drug that produces the symptoms of addiction: specifically, dependence, withdrawal, and craving.[56] The rapidly developing brains of children and adolescents are particularly susceptible to nicotine addiction.[57]

95. Beyond addiction, nicotine possesses additional health risks. Youth who use JUUL are at risk for long-lasting effects by exposing their developing brains to nicotine.[58] These risks include deficits in attention and cognition, mood disorders, and permanent lowering of impulse-control.[59]

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[56] Lorena Siquiera, *Nicotine and Tobacco as Substances of Abuse in Children and Adolescents*, American Academy of Pediatrics (Jan. 2, 2017), https://pediatrics.aappublications.org/content/pediatrics/139/1/e20163436.full.pdf.
[57] Natalia Goriounova & Huibert D. Mansvelder, *Short and Long-Term Consequences of Nicotine Exposure during Adolescence for Prefrontal Cortex Neuronal Network Function*, 2(12) Colorado Spring Harbor Perspectives in Medicine (Dec. 2012), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3543069/.
[58] *Id.*
[59] U.S. Department of Health, and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease, Prevention and Health Promotion, Office on Smoking and Health, *E-Cigarette Use Among Youth And Young Adults: A Report of the Surgeon General -*

96. Nicotine affects adolescent brains by changing the way synapses (connections between brain cells) are formed and harming the parts of the brain that control attention and learning. A report by the U.S. Surgeon General explains the importance of this synaptic development during adolescence: "Each time a new memory is created, or a new skill is learned, stronger connections – or synapses – are built between brain cells. Young people's brains build synapses faster than adult brains."[60]

97. The damage caused by JUUL's nicotine is not something adolescents will outgrow. Even a brief period of continuous or intermittent nicotine exposure during adolescence may contribute to lasting neurobehavioral damage.[61]

98. Studies in animals have shown that nicotine exposure during adolescence permanently affects the brain by increasing the rewarding properties of other drugs, including alcohol, cocaine, and methamphetamine. Similarly, e-cigarette use has been linked to future cigarette smoking. Non-smoking e-cigarette users, who were at low risk to become future smokers prior to e-cigarette use, were found "to be more than four times more likely to begin

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Executive Summary (2016), https://e-cigarettes.surgeongeneral.gov/documents/2016_SGR_Full_Report_non-508.pdf.

[60] U.S. Surgeon General, *Know the Risks: E-Cigarettes and Young People*, https://e-cigarettes.surgeongeneral.gov/knowtherisks.html.

[61] Centers for Disease Control and Prevention, *Quick Facts on the Risks of E-cigarettes for Kids, Teens, and Young Adults* (Feb. 3, 2020), https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html.

smoking tobacco cigarettes within 18 months compared with their peers who do not use e-cigarettes."[62]

99. Adolescents are often unaware that vape products like JUUL contain nicotine. A 2018 Truth Initiative study found that 63% of 15 to 24-year-olds did not understand that JUUL products contain nicotine."[63]

100. While those figures might seem surprising, they are the logical result of JUUL's failure to disclose that JUUL contains nicotine. For the first three years on the market, JUUL failed to disclose its product contained nicotine. JUUL did not place a nicotine warning label on its packaging until the FDA required it to do so in mid-2018.[64] And nearly all of JUUL's social media presence did not disclose that its product contained nicotine.

101. Despite the harmful effects of nicotine addiction on teens, the medical profession lacks effective tools for helping teens quit JUUL. Little research exists on youth tobacco cessation, and most of the therapies approved for adults are either ineffective, or only marginally effective, in adolescents.[65]

B. JUUL deceptively conceals its unprecedentedly high nicotine concentration.

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[62] Truth Initiative, *Behind the Explosive Growth of JUUL* (Jan. 3, 2019), https://truthinitiative.org/news/behind-explosive-growth-juul.
[63] I*d.*
[64] Julie Creswell &Sheila Kaplan, *How JUUL Hooked a Nation on Nicotine*, New York Times (Nov. 23, 2019), https://www.nytimes.com/2019/11/23/health/juul-vaping-crisis.html.
[65] Jonathan P. Winickoff, *Examining JUUL's Role in the Youth Nicotine Epidemic*, Testimony before the U.S. House of Representatives Committee on Oversight and Reform Subcommittee on Economic and Consumer Policy (Jul. 24, 2019).

102. In comparison to traditional cigarettes and early vaping products, JUUL contains an "unprecedentedly high" nicotine concentration.[66] JUUL deceptively conceals its nicotine levels from consumers who are unaware that their product "satisfaction" is the result of JUUL's high nicotine levels, levels that exceed those of its competitors.

103. When JUUL entered the market, most e-cigarette companies used "freebase" nicotine, extracted from the tobacco plant. Freebase nicotine liquid came with high alkalinity levels which were harsh to inhale. Prior to JUUL, e-cigarettes with low levels of nicotine were often so harsh that even experienced smokers could not tolerate them, let alone teenaged non-smokers.[67]

104. To overcome this problem, JUUL added benzoic acid and produced a nicotine salt liquid that delivers nicotine without the harshness.[68]

105. JUUL seized on this nicotine salt technology as an opportunity to infuse JUUL with nicotine levels beyond what the public had ever experienced.[69] JUUL's patented chemistry allowed JUUL users to inhale more nicotine with less irritation, making it easier for youth to begin using JUUL.[70]

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[66] Robert K. Jackler & Divya Ramamurthi, *Nicotine Arms Race: JUUL and the high-nicotine product market*, 28(6) Tobacco Control (Feb. 2019), https://tobaccocontrol.bmj.com/content/28/6/623.
[67] Julie Creswell & Sheila Kaplan, *How JUUL Hooked a Generation on Nicotine*, New York Times (Nov. 23, 2019),https://www.nytimes.com/2019/11/23/health/juul-vaping-crisis.html.
[68] *Id.*
[69] Robert K. Jackler, *The Role of the Company in the JUUL Teen Epidemic*, Testimony for House Subcommittee on Economic and Consumer Policy (Jul. 24, 2019).
[70] Matthew L. Myers, *Campaign for Tobacco-Free Kids*, Testimony before the House of Representatives Committee on Oversight and Reform Subcommittee on Economic and Consumer Policy (Jul. 25, 2019).

106. When researchers first began to look at JUUL, JUUL's ultrahigh nicotine content stood out. Using a volume-based mg/ml standard of measurement, JUUL's Fruit Medley flavor contained a 58 mg/ml concentration of nicotine. By comparison, other commercially sold brands were as low as 3 mg/ml.[71]

107. The chart below shows how JUUL's use of nicotine salts allowed it to deliver the highest levels of nicotine of any tested e-liquid product even though JUUL's products contained very little harsh-to-inhale free-base nicotine compared to its competitors.

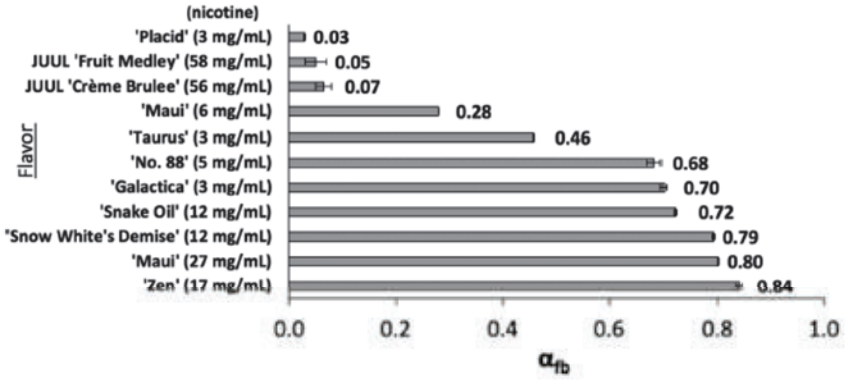


Figure 3. Free-base nicotine fraction (α_{fb}) in commercial e-liquids as an average using aromatic protons H_a and H_b. The ranges between free base values are indicated. Nicotine amounts as indicated to the right of each name were determined by NMR integrations, relative to the PG and GL resonances.

108. As the chart shows, JUUL's Fruit Medley and Crème Brûlée flavors contained 58 and 56 mg/ml of nicotine, respectively, more than double the

[71] Duell et al, *Chemical Free-Base Nicotine Determination in Electronic Cigarette Liquids by H NMR Spectroscopy*, 31, 6 Chemical Research in Technology, 431-434 (May 18, 2018), https://pubs.acs.org/doi/10.1021/acs.chemrestox.8b00097.

nicotine of the next-highest tested product. Yet those same JUUL products contained a far lower fraction of free-base nicotine (.05) than all but one of the other e-liquids. By comparison, other brands such as the "Zen" brand e-liquid could only achieve high nicotine concentrations (27 mg/ml) through higher levels of free-base nicotine (.84). While the "Placid" brand e-liquid also has low levels of free-base nicotine (.03), making it easy to inhale, nicotine salts allowed JUUL to offer a comparably easy-to-inhale product with a nicotine concentration nearly 20 times higher.

109. Instead of warning consumers that JUUL has almost 20 times the nicotine of its "easy-to-inhale" competitors, JUUL deceptively concealed its ultrahigh nicotine concentration from the public. JUUL's packaging describes its nicotine content as "5% nicotine strength," which deceptively and dramatically understates JUUL's actual nicotine strength.

110. JUUL pods typically contain a 59 mg/ml concentration of nicotine. Stated more accurately, JUUL's nicotine concentration is 5.9%, nearly 20% higher than the 5% figure JUUL discloses in some disclosures.

111. To arrive at this "5% strength" number, JUUL, in contrast to most e-liquid brands, measures its nicotine content by weight rather than by volume. JUUL's unique calculation factors in the higher specific gravities of propylene glycol and glycerin.[72]

[72] Robert K. Jackler &Divya Ramamurthi, *Nicotine Arms Race: JUUL and the High-Nicotine Product Market*, 28(6) Tobacco Control (Dec. 2019), https://tobaccocontrol.bmj.com/content/28/6/623.

112. Using its unique method of measurement, JUUL deceptively puts forward to consumers the "lowest sounding" measurement of nicotine (5% strength) and conceals its ultrahigh nicotine concentration (59 mg/ml).

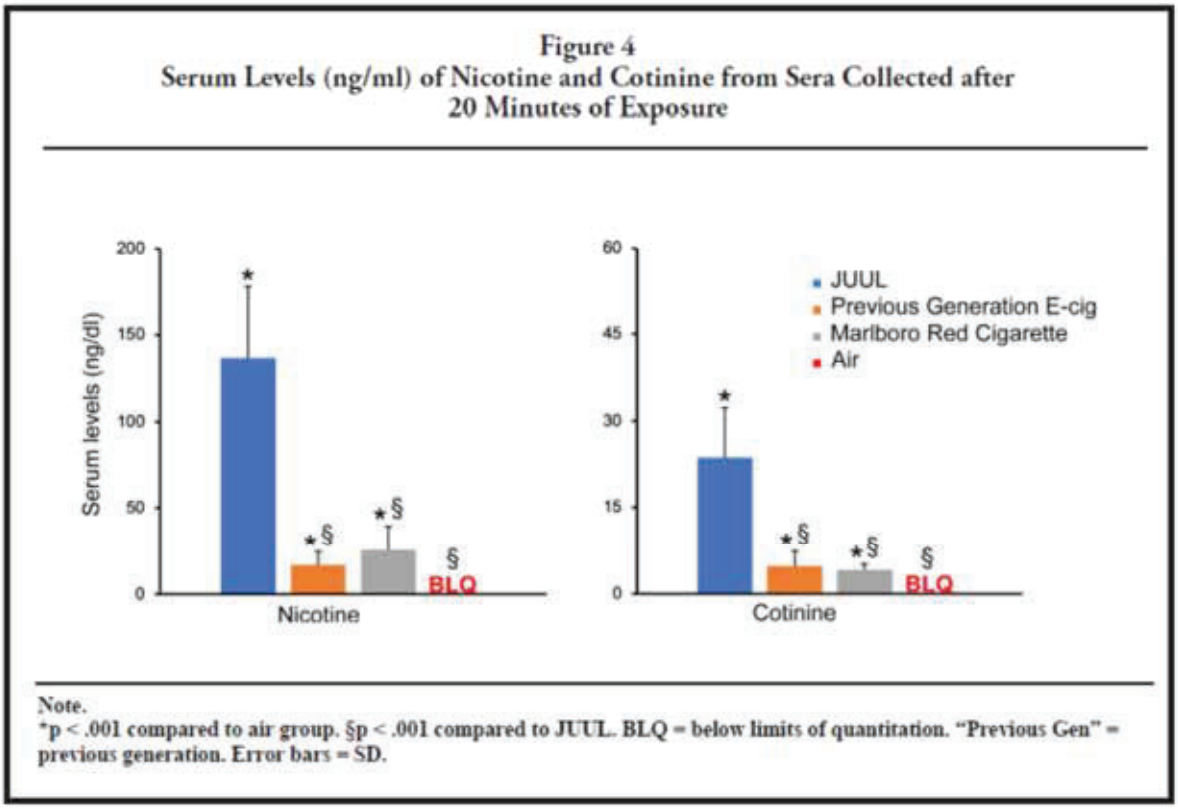
113. As researcher Dr. Robert Jackler of Stanford University explains, in the past, a 3% nicotine concentration was considered a "super high" nicotine concentration for an e-cigarette, appropriate for a two-pack-a-day smoker.

> Until recently, most e-cigarette liquids carried 1 to 2 percent nicotine, with a few considered "super high" at 3 percent, intended for the two-pack-a-day smoker. In 2015, Juul introduced a 5 percent nicotine vaping liquid with a novel chemistry — nicotine salts — which improved palatability, enabling higher concentrations of nicotine without undue bitterness.[73]

114. A 2020 study published by researchers at the University of California San Francisco found that JUUL delivers 5 times more nicotine to the blood, per puff, than a Marlboro

[73] Hanae Armitage, *Juul Instigated a "Nicotine Arms Race," Researchers Say*, SCOPE (Feb. 8, 2019), https://scopeblog.stanford.edu/2019/02/08/juul-instigated-a-nicotine-arms-race-researchers-say/.

cigarette.[74]



115. The same study suggested that while adult former smokers using JUUL might know, based on their nicotine experience, when to stop, adolescent non-smokers may be more likely to "chase higher levels of the drug's effects," and binge on JUUL to the point of rapid addiction.[75]

[74] Poonam Roa, et. al., *JUUL and Combusted Cigarettes Comparably Impair Endothelial Function*, 37(8) Tobacco Regulatory Science 30 (Jan. 2020), https://www.ingentaconnect.com/content/trsg/trs/2020/00000006/00000001/art00004;jsessionid=1vffpvbn4kk27.x-ic-live-03#; Scott Maier, *JUUL Delivers Substantially More Nicotine than Previous Generation E-Cigs and Cigarettes*, UCSF (Jan. 6, 2020), https://www.ucsf.edu/news/2020/01/416371/juul-delivers-substantially-more-nicotine-previous-generation-e-cigs-and.

[75] *Id.*

116. Unlike the United States, the United Kingdom has not experienced an epidemic of youth vaping.[76] Experts attribute this marked contrast to the fact that the United Kingdom limited the amount of nicotine in e-cigarettes, including JUUL, to 20 milligrams of nicotine per milliliter. JUUL infused its U.S. product with 59 milligrams of nicotine per milliliter, almost two and half times the nicotine limit allowed in the United Kingdom.[77]

117. JUUL's dominance in the United States stems in part from its ultrahigh nicotine content. In July of 2018, JUUL investor Darsana Capital reached out to tobacco industry investors and consultants to get the industry forecast for JUUL. Darsana shared their findings in an email to JUUL CEO Kevin Burns. Darsana reported that a Phillip Morris shareholder noted that JUUL was "expanding" the market for nicotine and that its new growth was coming from new nicotine users. The consultant informed Burns that the shareholder was "skeptical that JUUL would work well in the U.K. because he [thought] that 50mgs of nicotine might be the 'decisive' reason why JUUL is successful in the U.S."

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[76] Public Health England, Press Release: *Regular E-Cigarette Use Remains Low Among Young People in Britain* (Feb. 27, 2019), https://www.gov.uk/government/news/regular-e-cigarette-use-remains-low-among-young-people-in-britain (access Feb. 28, 2020).

[77] Stephen J. Dubner, *The Truth About the Vaping Crisis*, Freakonomics (Nov. 20, 2019), http://freakonomics.com/podcast/vaping-nicotine/.

118. A 2018 medical study of adolescent vapers, ages 12-21, found that adolescents who use JUUL had markedly higher nicotine levels in their systems than adolescents who smoked traditional cigarettes.[78]

119. Even adult JUUL users have commented on JUUL's excessive nicotine. In October of 2016, JUUL carried out a product survey. Among the early "takeaways," discussed in an internal email, was that JUUL consumers reported that JUUL's nicotine strength was too high. "People claim to want lower nic strength (maybe what they really want is something 'less harsh'?)"

120. JUUL ignored this feedback and continued to focus on ways to mask the potency of their product.

121. In March of 2018, a parent wrote to JUUL about her 16-year-old daughter's addiction to JUUL's nicotine, expressing concern about the effects on her daughter's brain, and asking the company to at least consider a lower nicotine concentration.

[78] Maciej Lukasz Goniewicz, et. al., *Higher Exposure to Nicotine Among Adolescents Who Use JUUL and Other Vape Pod Systems*, 28(6) Tobacco Control (Sept. 7, 2018), https://tobaccocontrol.bmj.com/content/28/6/676.

On Tue, May 1, 2018 at 6:06 PM, [redacted] wrote:

My daughter started using a JUUL when she was 14. I have confiscated 5 of them from her room over the past 2 years – today I am about to confiscated the 6th. She is now 16 and I am so worried about what your product has done to her brain. She is obviously addicted and I don't know how to help her. She has been very moody, angry, depressed and sometimes defiant – and I attribute it to the nicotine.

I know that many of the teens at her school use your product as well. You say that your product is intended for adults but I am sure you are pleased with all the money you are making from addicted teens. What a shame. Maybe you could AT LEAST put less nicotine in them??? Or better yet, NO NICOTINE.

You are not doing society any favors. You are ruining our youth and the next generation of thinkers. With all the troubles we have with mental illness among youth, you should take a very hard look at what your company is contributing to the development of young minds and the future problems that will arise from teens using your product.

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122. JUUL's attorney responded to the parent by falsely claiming that JUUL is a smoking cessation product and assuring the parent that JUUL was "evaluating" its nicotine strengths.

From: Mark Jones on behalf of Mark Jones <mark@juul.com>
To: [redacted] Julie Henderson
CC: youthprevention@juul.com
Sent: 5/4/2018 7:35:02 AM
Subject: Re: My daughters JUUL addiction

Hi [redacted]

Our corporate mission it to put an end to combustible cigarettes and provide the 38 million smokers in the US and the 1 billion smokers over the whole world a true alternative to cigarettes and we are extremely proud of that mission.

However, we understand that with this mission, there is also an obligation to do this while also working diligently to ensure our product is not used by those who are under the age to use our product. If you have any additional specific information about how your daughter may have gotten access to our product please provide us details so we can follow up and investigate. We do not place retailers in any specific location and these are often independently owned franchises of larger chain operations.

I've also added Julie Henderson, Dir. of Youth Prevention and Education, to this email to help provide some references for addiction treatment and support for any educational program we might be able to partner with, but this should be addressed by your healthcare professional as only they know any specific factors that may be relevant to your daughter's care.

We are further evaluating our nicotine strengths and additionally support the goal of avoiding underage use with the following: 80

[79] Parent name and email address redacted to protect privacy.
[80] *Id.*

123. Despite JUUL's awareness that its high nicotine concentration was fueling the youth epidemic, JUUL waited until August of 2018 to offer a lower alternative, 3% nicotine, and even then, only for some, but not all its flavors. Three percent is not any great concession. At the time JUUL came on to the market, the most popular e-cigarette products contained nicotine strengths of between 1% and 2.4%.[81]

IV. JUUL RECKLESSLY FAILED TO SET UP A PROPER AGE-VERIFICATION SYSTEM AND ALLOWED YOUTH TO ACCESS ITS PRODUCT.

124. JUUL reaped unparalleled economic success between 2015 and 2019. In July 2018, JUUL surpassed the $10 billion valuation level, just seven months after its first round of venture capital funding.[82] The previous record-holder, Facebook, took four times as long to reach the same valuation level.[83]

125. During this time of unparalleled financial success, JUUL recklessly employed an age-verification system that failed to exclude underage purchasers. JUUL's age-verification system did, however, inform JUUL that large numbers of underaged youth were purchasing, or attempting to purchase, their product.

126. JUUL has been selling e-cigarettes in Colorado since 2015. Prior to 2015, and until December 30, 2019, Colorado prohibited the sale or distribution

[81]Truth Initiative, Behind the Explosive Growth of JUUL (Jan. 3, 2019), https://truthinitiative.org/news/behind-explosive-growth-juul.
[82] Don Reisinger, *Juul Reached Its $10 Billion Valuation 4 Times Faster Than Facebook*, Fortune (Oct. 10, 2018), https://fortune.com/2018/10/10/juul-vaping-pen-valuation-vs-facebook/.
[83] *Id.*

of e-cigarettes to a person under 18 years of age, and made it illegal for a person under 18 years of age to purchase e-cigarettes.[84] On December 30, 2019, Congress increased the federal minimum age to purchase tobacco products from 18 to 21, and made it unlawful to sell or distribute e-cigarettes to any person under 21 years of age.[85]

127. JUUL's youth-directed marketing and manufactured social media buzz intentionally and deliberately attracted young consumers to JUUL's products and JUUL's website. Once on the website, consumers could sign up for an account, and use that account to purchase JUUL products for delivery to a designated address. Consumers could also use that account to request replacements for malfunctioning JUUL devices. Accountholders automatically received JUUL's marketing emails.

128. Within months of its 2015 launch, JUUL knew that underaged minors purchased JUUL products via its website.[86]

129. Despite this awareness, JUUL refused to take adequate steps to prevent underaged consumers from purchasing JUUL products. While JUUL hired Veratad, an outside vendor, to manage age-verification for its website,

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[84] C.R.S. § 18-13-121 (1)(a), (A person shall not give, sell, distribute, dispense, or offer for sale a cigarette, tobacco product, or nicotine product to any person who is under eighteen years of age); *see also* 1991 Colo. Legis. Serv. H.B. 91-1088 (West)

[85] 21 U.S.C.A. § 387f.

[86] Matt Richtel & Sheila Kaplan, *Did Juul Lure Teenagers and Get 'Customers for Life?*, New York Times (Aug. 27, 2018), https://www.nytimes.com/2018/08/27/science/juul-vaping-teen-marketing.html.

ease of sales, in contrast to stopping underage purchases, remained JUUL's primary concern.

130. For example, in setting up the parameters for its age-verification system, JUUL expressed its preference for looser controls that did not impede sales to legal buyers.

> On Wed, Oct 28, 2015 at 6:03 PM, Kate Horowitz <khorowitz@pax.com> wrote:
> Hey Thomas, following up on this email. Were you able to use this data to compare to what info what returned from your database? Curious to know if we're getting matches, but the data just isn't "matching" enough for the system to recognize. If that's the case, maybe we can chat about better / fuzzy matching logic to bump up our rate of people who get through age verification.
>
> On Fri, Oct 23, 2015 at 10:34 AM, Kate Horowitz <khorowitz@pax.com> wrote:
> Hey Thomas, here are some examples of user data for users who failed age verification. On your end, can you take a look at what info would have been returned for these users, to see if perhaps we're getting close to a match and need to tweak the way we compare data?

131. In addition to looser controls, JUUL opted to not require an adult signature for deliveries, even though JUUL's predecessor, PAX, had required this youth purchase prevention tool. In June of 2016, JUUL's VP of Commerce stated that JUUL's purchase "flow" was already too "complex" and "the interaction between adult sig and sig control and age verification just seems like an area we should try and make lightweight for consumers."

132. JUUL consistently prioritized more sales over age-verification. Faced with a new age-verification system for its email marketing list in November 2017, JUUL's Director of eCommerce conceded that 30% of JUUL's email marketing recipients had not been age-verified but expressed a greater concern about losing sales leads.

133. JUUL wanted to make sure as many consumers as possible could pass JUUL's putative age-verification check. In January of 2018, when informed that age-verification pass rates for attempted purchases were low, a member of JUUL's age-verification team responded, "Thanks Tom. This is very helpful as our new CEO is very focused on these pass rates and what we can do to improve them while increasing our ability to detect fraud."

134. After expressing a preference for looser age-verification controls, JUUL asked Veratad how underaged consumers successfully passed through its age-verification system. In a January 29, 2018 email discussion, Veratad explained that JUUL's age-verification system did not require an exact address match. Instead, JUUL permitted an age-verification pass with only a zip code match. This allowed underaged consumers to use a neighbor's name and date of birth and their own address as an easy circumvention of JUUL's lax age-verification.

135. JUUL's age-verification system did not cross-check public records about the purchaser with debit or credit card information. This allowed any minor with a pre-paid debit card to purchase JUUL products via its website.

136. In March 2018, Veratad informed JUUL that the "amount of transactions that result with an indication of a minor is high compared to the industry." In response, JUUL did not change its practices, resulting in continued knowing sales to minors.

137. Throughout 2018, JUUL received daily requests from parents to deactivate their underaged child's JUUL account. In response, JUUL deactivated over three hundred JUUL accounts that had initially passed JUUL's age-verification system, but in most of those instances a parent had to complain before JUUL did so.

138. Ultimately, JUUL's reckless attitude towards age-verification put the burden on parents to uncover how their child was able to purchase JUUL products online:

Thanks Barbara - not sure on the rationale for the ordering, it might be that they are trying to use a known address as a central shipping point. We have blocked the address, emails, and the related names in our system. With the credit card, the order is under your name so it is likely a pre-paid debit card that doesn't have a name associated with it - otherwise it would have failed our fraud detection system.

I have also added Izzy, the head of our Customer Service, to help get you the pre-paid label so you can return the package. Thanks for all your help in addressing this issue.

Mark Jones
Assoc. General Counsel
[redacted]

On Tue, Dec 12, 2017 at 12:28 PM, Barbara [redacted]mail.com> wrote:
Not that I am aware of, one of those names is my daughter and her friend lives at that address and is 16 and from what I've learned she uses a JUUL. It is possible they have been trying to get these cartridges for her? I do know many kids in my daughter's HS have JUUL's, so they are getting them some how. Can you provide me the name on the card? That will tell me who paid for it, my daughter believes it may have been someone named [redacted] not sure of the spelling.

Sent from my iPhone

On Dec 12, 2017, at 1:14 PM, Mark Jones <mark@juul.com> wrote:

Hello Barbara,

After researching the account the information we have on file is the following:

- Name: Barbara [redacted]
- Email: [redacted]
- Last 4 of CC: [redacted]

We also have have other attempted orders that have used this address with the following individuals:

- [redacted].OUD.COM
- [redacted]GMAIL.COM
- [redacted]GMAIL.COM
- [redacted]OO.COM

Can you please confirm if any of these are authorized purchasers? Additionally, if we provide you a pre-paid return label, would you be willing to ship back the parcel?

Mark Jones
Assoc. General Counsel
[redacted]

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139. In addition to knowing of illegal youth purchases, JUUL knew that minors obtained its product through flaws in JUUL's return policy. As recently as October 2017, JUUL did not require customers to return a broken device in

[87] Parent and potential minor last names and email addresses redacted to protect privacy.

order to get a new one. Consumers only needed to send an email with the product serial number to obtain a new JUUL device.

140. A buyer could create an unlimited number of accounts using different email addresses but using the same age-verification information. This allowed youth to obtain numerous "replacement" devices from multiple accounts, and then share them or sell to other youth. Though JUUL lost money on these warranty replacements, they made money on the sale of pods for use in these devices. JUUL, therefore, had little incentive to close this loophole.

141. Between August and November 2017, JUUL received 24,070 replacement requests on devices that had been produced by JUUL just within the last four weeks.

142. A JUUL audit in October 2017 determined that a single customer purchased 60 devices and then used the serial numbers to get 300 replacements by way of device warranties.

143. Discussing continued high numbers of requests for JUUL device replacement in November of 2017, JUUL employees suggested that "many of these are from underage users." Employees suggested that JUUL change its easy replacement policy and require consumers to return a broken device in order to receive a replacement one.

144. Despite knowing that its replacement policy facilitated youth access, JUUL continued to tolerate unusually high requests for replacements. Beginning in October 2017, JUUL deactivated accounts only where a consumer

submitted fifty or more replacement requests. In other words, a consumer could buy one device and make forty-nine warranty replacement requests and maintain an account in good standing with JUUL. This policy only made economic sense with the knowledge that this mechanism allowed the distribution of JUUL devices (and the corresponding increase in demand for JUUL pods) to consumers who otherwise could not obtain them.

145. Underaged users shared their knowledge of how to work around JUUL's inadequate age-verification systems on the internet forum Reddit. A study of 716 threads and 2935 comments on the publicly available subreddit "UnderageJuul" found that underaged users, between the ages of 13-21, shared information on how to use their parents' ID information to open accounts and how to obtain free JUUL devices through JUUL's lax replacement policy. UnderageJuul was created on July 9, 2017 and was removed by Reddit on January 8, 2018.[88]

146. JUUL never verified the ages of consumers on its email marketing list. In July of 2018, Dr. Robert Jackler of Stanford University informed the Washington Post and JUUL that he had discovered a potential technical flaw with JUUL's marketing emails — JUUL sent marketing emails to consumers

[88] Yongcheng Zhan, et. al., *Underage JUUL Use Patterns: Content Analysis of Reddit Messages,* Journal of Medical Internet Research vol. 21,9 (September 9, 2019), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6786857/#!po=69.0476.

even after they failed age-verification on JUUL's website. These marketing emails offered promotional discounts and introduced new JUUL flavors.[89]

147. In a July 30, 2018 Washington Post article, a JUUL spokesperson vigorously denied the allegation, claiming "[i]f a person fails the age verification process, he or she does not get added to an email list-serve to receive information and additionally would be unable to purchase product from us."[90]

148. JUUL's response was less than forthright. JUUL's emails show that only one week after the denial in the Washington Post, JUUL's CEO and its eCommerce team strategized on how to age-verify 500,000 email marketing recipients, while recognizing that they were boxed in by their statements to the press and JUUL's failure to have age-verified the recipients earlier.

On Sat, Aug 4, 2018 at 8:34 PM Matt David <mattdavid@juul.com> wrote:
Telling non-AV'd users they need to pass an AV test is a massive red flag to press. Crystal clear we didn't do it in the past. Better to frame as a broader new policy; we can mention other things we're doing. But how we execute this affects the press strategy.

149. JUUL managed to operate a billion-dollar company with global ambitions, yet JUUL chose not to take the simple steps necessary to prevent purchases by youth. Instead, JUUL concerned itself with the ease of online purchases and left it to parents to discover that their child was a JUUL customer.

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[89] Deanna Paul, *E-cigarette Maker JUUL Targeted Teens With False Claims of Safety, Lawsuit Claims*, Washington Post (July 30, 2018), https://www.washingtonpost.com/news/to-your-health/wp/2018/07/30/e-cigarette-maker-juul-targeted-teens-with-false-claims-of-safety-lawsuit-claims/.

[90] *Id.*

V. JUUL RECKLESSLY DOWNPLAYED ITS DANGEROUS INGREDIENTS.

A. JUUL concealed the dangers of inhaling propylene glycol and glycerol, its primary ingredients.

150. Nicotine is not the only dangerous ingredient in JUUL. JUUL lists five primary ingredients: glycerol, propylene glycol, flavors, nicotine, and benzoic acid. With this oversimplified ingredient list, JUUL conceals the fact that these ingredients are heated and inhaled as an aerosol, a process that releases 60 to 100 foreign chemicals, including known carcinogens, into the human lungs.[91] JUUL conceals the fact that these ingredients are not intended for human inhalation and pose great potential health risks to consumers.

151. One of the documents in JUUL's files was a Dow Chemical document titled "A Guide to Glycols." Dow Chemical's guide advises that prolonged inhalation of saturated vapors of propylene glycol may be irritating to the upper respiratory tracts, "[t]herefore breathing spray mists of these materials should be avoided."

152. JUUL documents also included an Altria study on the effects of propylene glycol inhalation. Altria is a 35% owner of JUUL and the manufacturer of Marlboro cigarettes. For the study, Altria exposed 22 female and 22 male beagle puppies to propylene glycol through an aerosol generator

[91] Michelle Brubaker, *Vaping: A Serious Hit to Your Health*, UC San Diego Health (Oct. 31, 2019), https://health.ucsd.edu/news/features/Pages/2019-11-12-vaping-a-serious-hit-to-your-health.aspx.

over the course of 28 days.[92]

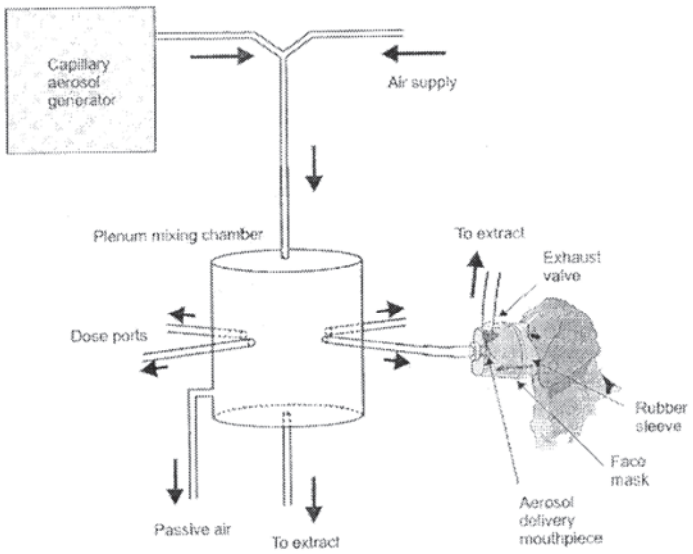

Fig. 1. Diagram of the inhalation exposure system and face mask used to deliver CAG-PG aerosol to Beagle dogs in the MTD and 28-day repeated exposure inhalation study. The diagram depicts the position of the exposed animals with respect to the CAG and plenum, as well as the CAG-PG aerosol delivery using a face mask.

153. After completing the 28-day study, Altria euthanized the puppies and analyzed the health effects. The study revealed that propylene glycol inhalation had a negative impact on the composition of the beagles' blood, including decreases in hemoglobin, red blood cells, and hematocrit in both the male and female beagles. The report described changes with the female beagles' blood composition as statistically "significant." Despite these obviously negative results, the Altria researchers improbably concluded it would be safe to continue with testing on humans.[93]

[92] Michael S. Werley et. al., *Non-clinical Safety and Pharmacokinetic Evaluations of Propylene Glycol Aerosol in Sprague-Dawley Rats and Beagle Dogs*, 283(1-3)Toxicology (Sept. 5,2011), 76-90, https://www.ncbi.nlm.nih.gov/pubmed/21683116.
[93] *Id.*

154. As part of the same Altria study, researchers exposed rats to propylene glycol over the course of 28 days and observed bleeding around the rats' eyes and noses. The researchers attributed the bleeding to propylene glycol's drying effect on mucous membranes, as noted in earlier studies on the irritant potential of propylene glycol.

155. Research continues to identify new dangers of inhaling propylene glycol and glycerol. Dr. Farrah Kheradmand and a team of researchers at Baylor College of Medicine studied the effects of inhaling propylene glycol and glycerol, without nicotine, on mice and found that inhalation of these solvents handicaps the immune cells in the lungs.[94]

156. Kheradmand and her team noticed significant changes in the macrophages of the lungs of mice exposed to propylene glycol and glycerol inhalation for four months. Macrophages are part of the lung's delicate lining and are critical to the lung's physiological and immune functions.[95]

157. After four months of propylene glycol inhalation, Kheradmand and her team then exposed the mice to the influenza virus. The studies showed that propylene glycol and glycerol inhalation caused decreased immunological response. As a result, mice that were exposed to even small doses of influenza died.[96]

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[94] Farrah Kheradmand et. al., *Electronic cigarettes disrupt lung lipid homeostasis and innate immunity independent of nicotine*, 129(10)J Clin Invest. 4290-4304 (Oct.1, 2019), https://doi.org/10.1172/JCI128531.
[95] *Id.*
[96] *Id.*

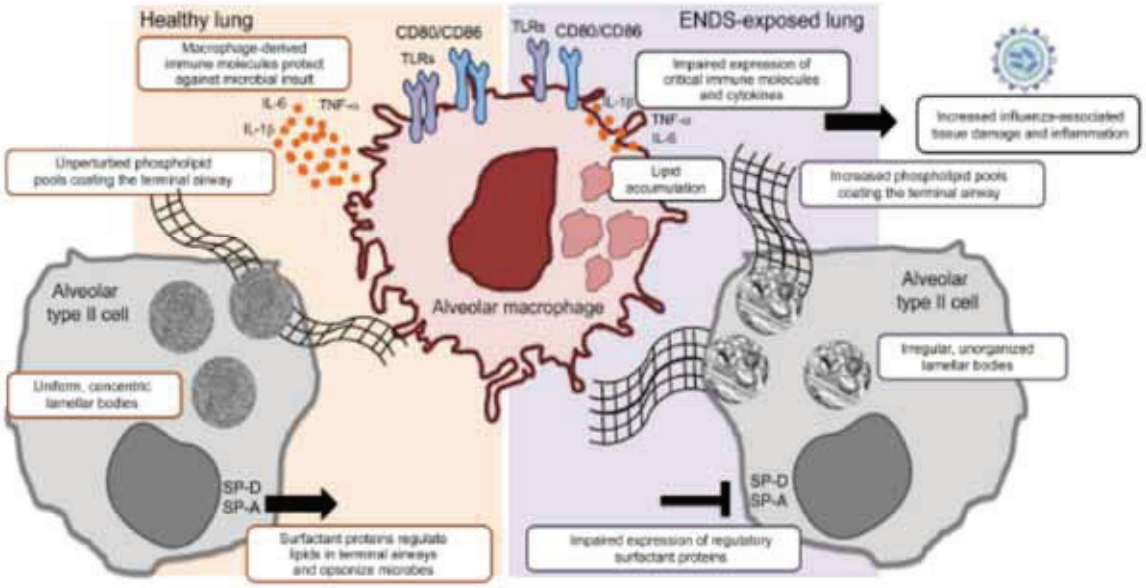

Figure 9. Summary model: ENDS-mediated changes in the lung upon chronic exposure. The lung's delicate surfactant layer is of critical importance to the organ's overall physiology and innate immune function. Both alveolar type II cells and alveolar macrophages are the principal subsets that maintain and catabolize surfactant at the liquid-air interface. Our study reveals that ENDS exposure disrupts both the lipid and protein components of pulmonary surfactant, increasing phospholipid pools in the airway and decreasing the expression of the regulatory surfactant proteins SP-A and SP-D. Lipid deposition and impaired immune function are distinct features of alveolar macrophages upon chronic ENDS treatment. Upon viral infection, ENDS-exposed mice exhibit increased morbidity and mortality with excessive pulmonary damage and inflammation late in infection. Of chief importance, the ENDS-mediated effects observed in our model are independent of the presence of nicotine.

158. Dr. Kheradmand notes that the FDA has never determined, or been asked to determine, whether these chemical solvents are safe for inhalation, much less chronic inhalation.[97]

159. Because vaping impairs the lungs' immune system, those who vape have a harder time fighting off the pathogens that cause bronchitis, influenza, and pneumonia. Public health officials now warn that vaping increases the risk of developing complications with the COVID-19 virus.[98]

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[97] Elsa Partan, Heather Goldstone, *Vaping Isn't Safe, But It's Not the Nicotine. It's the Liquid,* WCAI NPR (Sept. 23, 2019), https://www.capeandislands.org/post/vaping-isnt-safe-its-not-nicotine-its-liquid-researcher-says#stream/0.

[98] Julie Ries, *The Scary Relationship Between Vaping and Coronavirus*, Huffington Post, (April 13, 2020), https://www.huffpost.com/entry/vaping-and-coronavirus-symptoms-complications_l_5e94649cc5b6765e95646a6f; Bhatta D, Glantz S. Association of E-Cigarette Use

160. JUUL was well aware of the medical profession's growing concern over the chemicals in JUUL and the associated health risks. JUUL tracked statements in the media by health professionals and researchers about the potential dangers of JUUL.

161. JUUL maintained spreadsheets with links to articles in which health care professionals stated their concerns about propylene glycol and glycerol.

162. The media articles JUUL collected included a May 25, 2018 article from the Bergen Record in which a substance abuse prevention expert commented on the inhalation of propylene glycol. "With vaping, we have an oily syrup that kids are vacuuming into their fragile respiratory system," he said. "The impact just isn't known."

163. JUUL also tracked an August 10, 2018 article in Forbes magazine where Professor Robert Jackler of Stanford University commented on JUUL's willingness to experiment on teenagers' lungs:

> The company has behaved according to the traditional strategies of the tobacco industry in targeting youth while claiming that their product was meant only for adult smokers. The liquid solution in the pods typically contains a mixture of nicotine, propylene glycol, glycerin and other additives. Long-term effects of inhaling vapors of

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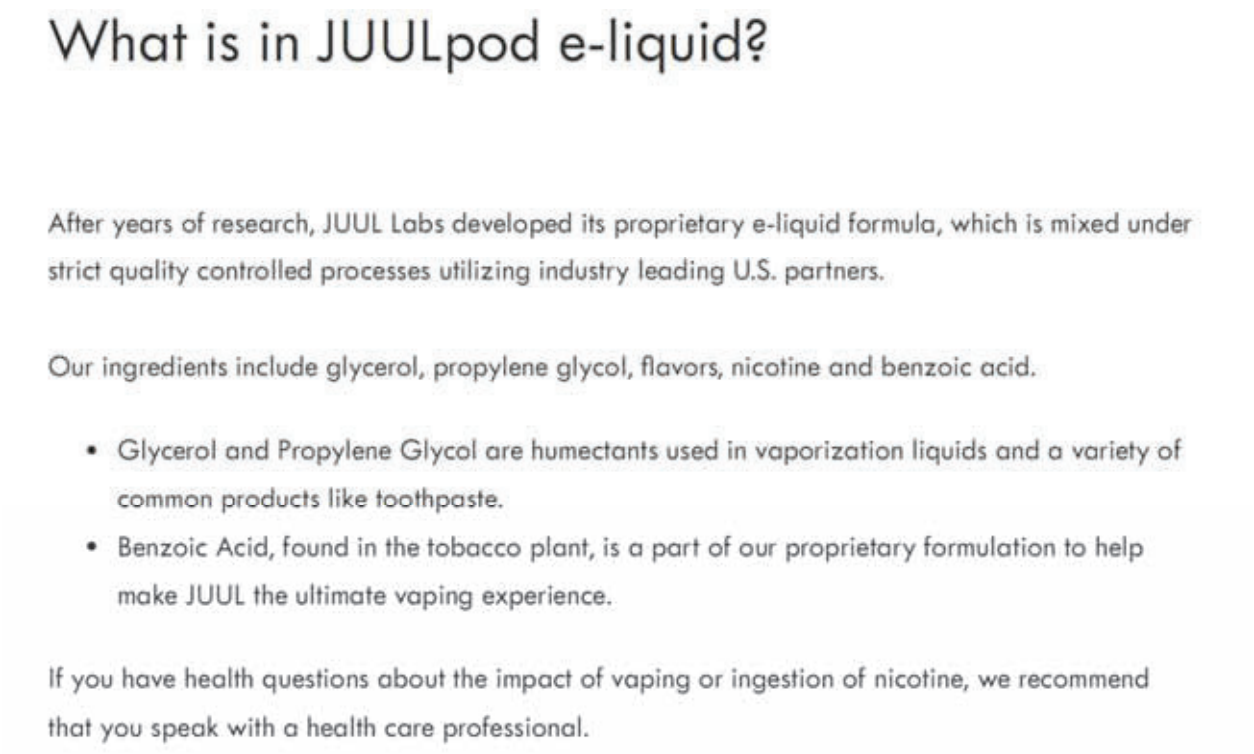
With Respiratory Disease Among Adults: A Longitudinal Analysis. *Am. J. Prev. Med.* 2019; Cho JH, Paik SY (2016) Association between Electronic Cigarette Use and Asthma among High School Students in South Korea. PLoS ONE 11 (3): e0151022. doi:10.1371/journal.pone.0151022; McConnell R. Electronic Cigarette Use and Respiratory Symptoms in Adolescents. *Am. J. Respir. Crit. Care Med.* 2017Apr 15; 95(8):1043-1049; Wang MP, Ho SY, Leung LT, Lam TH. Electronic Cigarette Use and Respiratory Symptoms in Chinese Adolescents in Hong Kong. JAMA Pediatr. 2016;170(1):89–91. doi:10.1001/jamapediatrics.2015.3024

these chemicals are unknown. Essentially, we are experimenting on teenagers' lungs.

164. Despite JUUL's tracking of the research that demonstrates the dangers of inhaling propylene glycol and glycerol, JUUL deceptively concealed the health risks and messaged that its product was safe.

165. On its website support page, JUUL asks the question "What is in JUUL pod e-liquid?"



What is in JUULpod e-liquid?

After years of research, JUUL Labs developed its proprietary e-liquid formula, which is mixed under strict quality controlled processes utilizing industry leading U.S. partners.

Our ingredients include glycerol, propylene glycol, flavors, nicotine and benzoic acid.

- Glycerol and Propylene Glycol are humectants used in vaporization liquids and a variety of common products like toothpaste.
- Benzoic Acid, found in the tobacco plant, is a part of our proprietary formulation to help make JUUL the ultimate vaping experience.

If you have health questions about the impact of vaping or ingestion of nicotine, we recommend that you speak with a health care professional.

166. JUUL deceptively assures consumers that propylene glycol and glycerol are used in a "variety of common products like toothpaste."

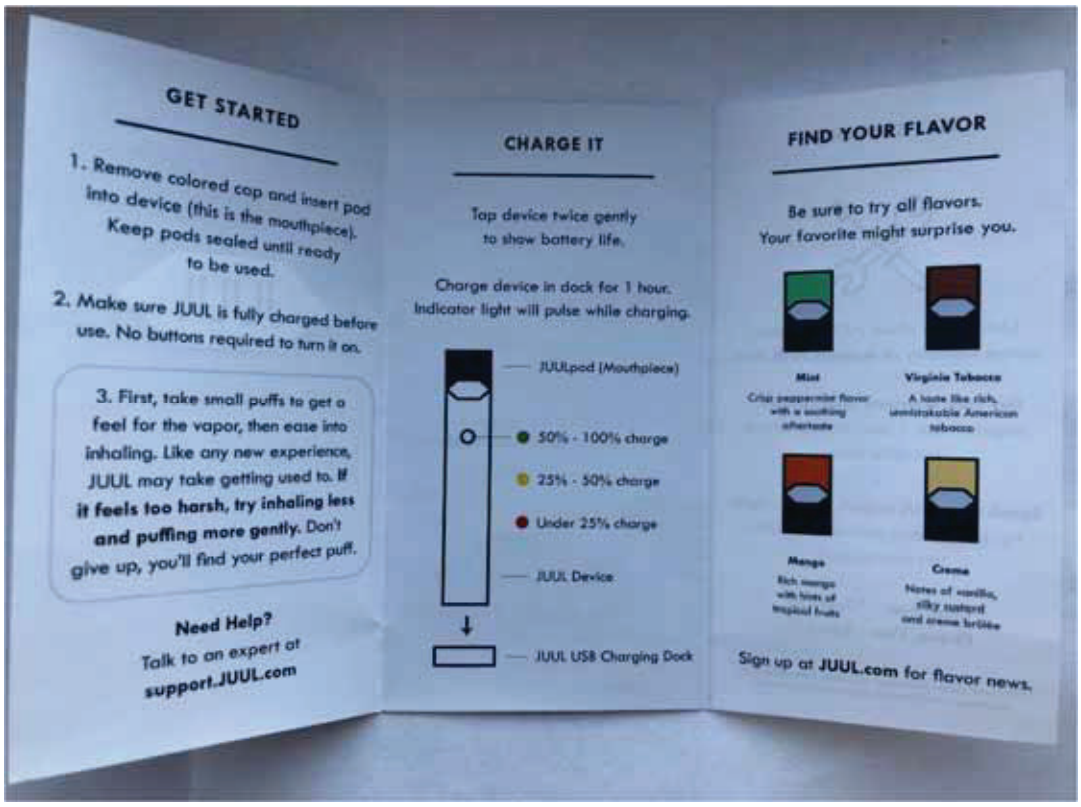
167. What JUUL failed to disclose is that while these chemical compounds are considered safe for limited oral consumption, as in toothpaste, they are not deemed safe once heated and inhaled.

168. The FDA has placed propylene glycol and glycerol in its GRAS category ("generally recognized as safe") for use as food additives.[99] The FDA's GRAS designation does not apply, however, to consumers' exposure to propylene glycol and glycerol vapors through a JUUL device. In the JUUL device these substances are not ingested, as in food, but heated and inhaled which results in exposure to the respiratory tract and lungs.[100]

169. In contrast to Dow Chemical's warnings which recommend avoiding inhalation, JUUL's starter instructions encourage the user to "ease into

[99]FDA, *GRAS Substances (SCOGS) Database,* https://www.fda.gov/food/generally-recognized-safe-gras/gras-substances-scogs-database.
[100] Anne S Kienhuis, et. al., *Potential Harmful Health Effects of Inhaling Nicotine-free Shisha-pen Vapor: a Chemical Risk Assessment of the Main Components Propylene Glycol and Glycerol*, 13(15) Tobacco Induced Diseases (June 27, 2015), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4482188/.

inhaling" and not to "give up."



JUUL "Get Started" instructions.

170. JUUL knew that neither the chemical companies nor public health professionals considered propylene glycol to be safe for human inhalation. JUUL did not disclose to the public the results of scientific studies which showed that propylene glycol inhalation had negative effects on mammals. JUUL deliberately chose to conceal the risks and dangers, and misleadingly compared the safety of its product to toothpaste.

B. JUUL deceived consumers to conceal the presence of formaldehyde in JUUL pods.

171. JUUL misled users about the presence of numerous dangerous compounds in its e-liquid and aerosol, including formaldehyde.

172. JUUL uses propylene glycol and glycerol to help transport nicotine and flavors, to provide a "throat hit," and to create a vapor cloud. When propylene glycol and glycerol are heated, they release formaldehyde.[101]

173. The FDA lists formaldehyde on its list of Harmful and Potentially Harmful Constituents in Tobacco Products and Tobacco Smoke as a carcinogen.[102] The International Agency for Research on Cancer classifies formaldehyde as a Group 1 carcinogen, which means that formaldehyde has the potential to cause cancer.[103]

174. JUUL affirmatively misled consumers to believe that formaldehyde was not present in its product, despite the results of its own 2016 testing, below, which clearly showed that the dangerous chemical is present in JUUL products.

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[101] Joseph G. Allen, *The Formaldehyde in Your E-Cigs*, New York Times (Apr. 4, 2018), https://www.nytimes.com/2018/04/04/opinion/formaldehyde-diacetyl-e-cigs.html; Sudin Thomas, *Health Risks of Vaping*, Stevenson University (Nov. 1, 2019), https://www.stevenson.edu/student-life/health-wellness/health-wellness-news/health-risks-of-vaping.

[102] U.S. Food and Drug Administration, *Harmful and Potentially Harmful Constituents in Tobacco Products and Tobacco Smoke: Established List*, (2012), https://www.fda.gov/tobacco-products/rules-regulations-and-guidance/harmful-and-potentially-harmful-constituents-tobacco-products-and-tobacco-smoke-established-list.

[103] *Id.*

Sample	Acetaldehyde (ug/g eLiquid)	Acetone (ug/g eLiquid)	Acrolein (ug/g eLiquid)	Formaldehyde (ug/g eLiquid)
Miint Liquid	0.98	0.69	ND	13.39
Miint Vapor	8.71	67.10	8.81	22.23
Fruut Liquid	1.00	0.48	ND	13.70
Fruut Vapor	7.95	25.53	6.93	15.46
Tabaac Liquid	ND	0.87	0.47	3.23
Tabaac Vapor	16.89	64.90	31.37	14.21
Bruule Liquid	0.73	Pending	ND	3.10
Bruule Vapor	6.57	26.91	NR	12.96

175. A JUUL email, related to this testing, discussed the formaldehyde levels, noting that "Mint and Fruit have [a] pretty high amount to start with."

176. The reference to "high amount to start with" derives from the fact that formaldehyde is often present at certain levels in e-liquids but is much higher in the aerosol after the e-liquid has been heated.

177. Early e-cigarette research and discussion drew consumers' attention to the dangerous byproducts of traditional cigarettes, including formaldehyde. The attention on these dangerous chemicals led consumers to inquire whether they were also present in JUUL.

178. JUUL gave deceptive and misleading responses to consumers' questions about formaldehyde on social media, and deceptively misrepresented

the presence of formaldehyde in JUUL in its marketing:

JUUL Labs' Twitter response to consumer comment.

179. Despite consumer concerns as to the dangers associated with formaldehyde, and inquiries as to whether the chemical is present in JUUL, JUUL deceptively messaged that JUUL does not "add" formaldehyde and failed to disclose that formaldehyde results from the process of heating propylene glycol and glycerol.

C. JUUL deliberately misled consumers about the presence of dangerous diacetyl in its JUUL pods.

180. Diacetyl is a chemical that was used in butter flavorings and that rose to national attention in the early 2000s after workers at microwave popcorn plants showed symptoms of flavorings-related lung disease and a condition later

referred to as "popcorn lung." Later studies on animals confirmed that diacetyl vapors cause lung damage.[104]

181. On December 8, 2015, researchers at the Harvard T.H. Chan School of Public Health published a study analyzing flavoring compounds in e-cigarettes. The study found that 39 of the 51 products tested contained diacetyl. Researchers noted that "[t]wo companies explicitly stated that their products do not contain diacetyl in written communication, yet in our testing we did find diacetyl in their product."[105]

182. When a retailer requested JUUL's data regarding the presence of diacetyl in JUUL's products in May 2016, Kelly Long, Director of Customer Service for PAX Labs, Inc., directed a sales manager to provide the information from JUUL's website stating that the manufacturing process does not add diacetyl.

183. JUUL made this statement in 2016, without having fully tested its product to determine if it did contain diacetyl. JUUL did not analyze its own product until 2018. The 2018 analysis revealed the presence of diacetyl in Cool Mint, JUUL's most popular pod flavor.

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[104]Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, *Criteria for a Recommended Standard: Occupational Exposure to Diacetyl and 2.3-Pentanedione* (Oct. 2016),, https://www.cdc.gov/niosh/docs/2016-111/pdfs/2016-111-ExecSum.pdf?id=10.26616/NIOSHPUB2016111.

[105] Allen JG, Flanigan SS, LeBlanc M, Vallarino J, MacNaughton P, Stewart JH, Christiani DC. 2016. Flavoring chemicals in e-cigarettes: diacetyl, 2,3-pentanedione, and acetoin in a sample of 51 products, including fruit-, candy-, and cocktail-flavored e-cigarettes. Environ Health Perspect 124:733–739; http://dx.doi.org/10.1289/ehp.1510185.

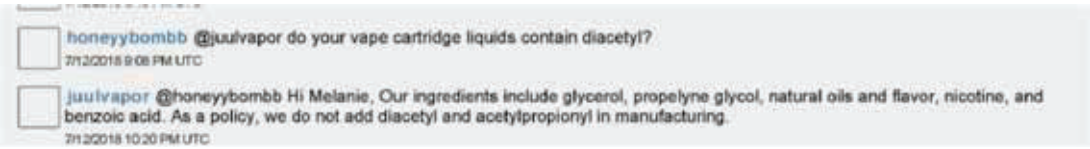
184. In an April 24, 2018 internal memo with the subject "'POPCORN LUNG'-Regular Perspective and Diacetyl Risk Assessment," JUUL's regulatory team reported that:

> The HPHC testing has been complete for 10 JUUL Flavors on both the E-liquid and Aerosol. With one exception (Cool Mint), the presence of Diacetyl could not be detected (ND) or below a level of quantification (BQL) in the e-liquid and aerosol. In the case of Cool Mint, small amounts of Diacetyl were noted in the e-liquid only (2.33ug/g).

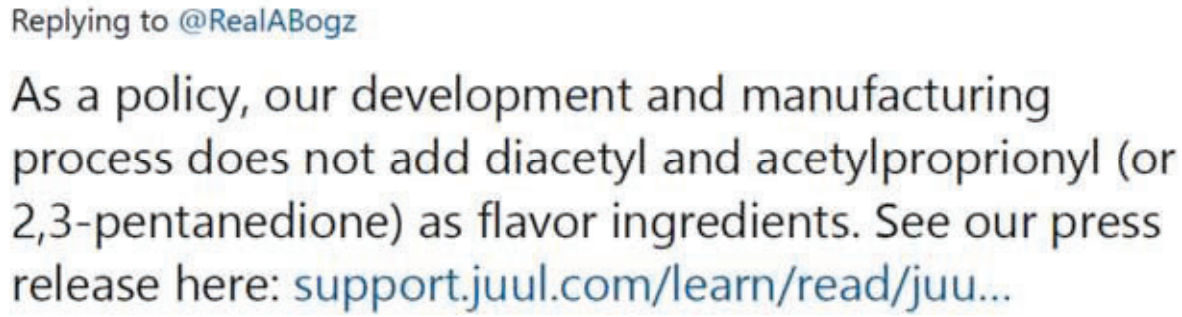
185. JUUL's response to these findings was to retest Cool Mint with less-sensitive equipment so they could report the presence of diacetyl as "below levels of detection," which JUUL then converted into the affirmative statement "Diacetyl-Not Detected."

186. Similar to its statements on formaldehyde, JUUL misled consumers about diacetyl by stating "[a]s a policy, our development and manufacturing process does not add diacetyl . . . as flavor ingredients."

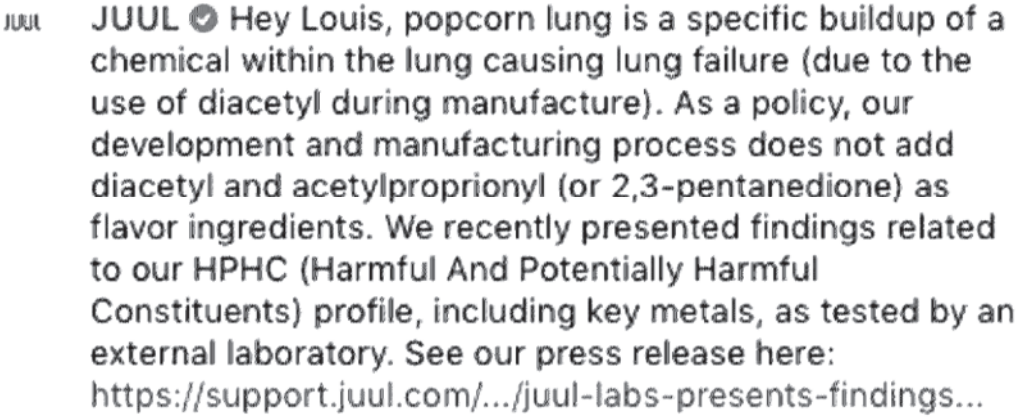
Response to consumer on Instagram:



Response to consumer on Twitter:



Response to consumer on Facebook:



D. JUUL concealed the dangers of inhaling the chemical compounds in its flavors.

187. During most of the time relevant to this Complaint, JUUL sold eight primary flavors: Mango, Fruit Medley, Crème Brûlée, Cool Cucumber, Cool Mint, Classic Menthol, Virginia Tobacco, and Classic Tobacco. In its advertisements, and on its website and packaging, JUUL lists only five ingredients: propylene glycol, glycerol, nicotine, benzoic acid and "flavors."

188. Each JUUL flavor is a distinct formulation, and JUUL failed to disclose that these simply-described "flavors," actually contain numerous complex chemical compounds.

189. While many flavorings are generally recognized as safe in food products for oral ingestion, they are typically not safety-tested for inhalation.[106] Because the digestive system processes flavorings differently than the lungs, many flavor compounds that are safe for ingestion are not safe for inhalation.[107]

190. Because JUUL does not disclose what chemical compounds are present in its flavors, the task of determining what is in JUUL has been left to public health researchers.

191. Researchers from Yale University, who analyzed JUUL's Crème Brûlée flavor, were surprised by its high levels of vanillin acetals, chemicals known to cause lung inflammation and irritation. The lead researcher commented that with vaping, "you are breathing this in. We didn't imagine people would be inhaling flavor compounds at the level they are now. We have very little information."[108]

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[106] The National Academy of Sciences et. al. (eds.), "Toxicology of E-Cigarette Constituents," *Public Consequences of E-Cigarettes*, National Academies Press (Jan. 23, 2018), https://www.ncbi.nlm.nih.gov/books/NBK507184/.

[107] Centers for Disease Control and Prevention, *Quick Facts on the Risks of E-cigarettes for Kids, Teens, and Adults*, https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html.

[108] Susie Neilson, *Irritating Compounds Can Show Up In 'Vape Juice,'* NPR (July 30, 2019), https://www.npr.org/sections/health-shots/2019/07/30/746238009/irritating-compounds-discovered-in-vape-juice.

192. While JUUL gives very simple names to its flavors, such as Crème Brûlée, Cool Mint and Fruit Medley, JUUL does not disclose the numerous chemical compounds in each of these flavors. JUUL creates its Crème Brûlée flavor, for example, by combining more than twenty different chemical compounds.

193. A study from the University of North Carolina found that the two primary ingredients in JUUL pods, propylene glycol and vegetable glycerin (glycerol), by themselves, are toxic to cells, and that their toxicity increases when flavorings are added.[109]

194. JUUL's documents show that it did not analyze its own flavoring compounds until 2018. JUUL knew that some of these chemical compounds were considered to be safe for oral ingestion but had not been tested or approved for inhalation. JUUL knew that some of these chemical compounds were classified as toxins, and again, had not been tested or approved for inhalation. Instead of disclosing the existence of both unknown and potential risks associated with inhalation of these flavors, JUUL gave them simple names such as "Crème Brûlée" and "Fruit Medley" and represented its product as safe.

E. JUUL misrepresented and concealed the dangers inherent in its products, while misrepresenting the rigor of its own health and safety testing.

[109] Sassano MF, Davis ES, Keating JE, Zorn BT, Kochar TK, Wolfgang MC, et al. (2018) Evaluation of e-liquid toxicity using an open-source high-throughput screening assay. PLoS Biol 16(3): e2003904. https://doi.org/10.1371/journal.pbio.2003904.

195. While concealing the dangers, JUUL represented that its product was rigorously tested for health and safety.

196. In an August 29, 2019 interview with CBS Morning News, JUUL CEO Kevin Burns was asked about the health and safety of its product, with the question, "Aren't you selling first and asking questions later?" Burns responded by claiming that JUUL is "tested for toxicity" and "does not present a risk" to the American public.[110]

197. JUUL, however, did "sell first" and "ask questions later" about the safety of its product. In a March 20, 2018 email, a JUUL chemist expressed frustration with a request from the regulatory team to put together a list of "yellow-flag" ingredients in JUUL and their potential health risks. The email chain and a supervisor's response made clear that, as of 2018, JUUL had not fully analyzed the ingredients in its e-liquids. The email chain also highlights JUUL's reluctance to disclose its ingredients.

[110] Interview with JUUL CEO Kevin Burns, CBS This Morning clip, (August 29, 2019), https://www.youtube.com/watch?v=dZ3y_MuCirQ.

From: Nick Brown on behalf of Nick Brown <nbrown@juul.com>
To: J. Curtis
CC: Ash Casselman; Manoj Misra; Adam Bowen; Dan Myers; John Fink; Philip Barone; Ramsey Atallah; Soumya Reddy; William Wright
Sent: 3/20/2018 9:52:46 PM
Subject: Re: Exec review of "yellow flag" eliquid ingredients

I think we all agree that we should have at least two people dedicating their entire career to this at JUUL. 2 Not 10 people kinda doing it with a 48-hour deadline. I'm one of the only people who have access to all of these ingredients so I feel like a big part of this falls on me, but I simply have too many other projects going on to make an awesome report for the exec team. Right now I'm on a business trip at our new eliquid vendor and I'm in meetings all day with them this week.

Between the US Portfolio, US Partner, UK, and EU eliquids there are hundreds of ingredients to analyze. We use a lot of botanical extracts, for better or worse, and these are additionally challenging to analyze. I've said it before, but we should do testing on each of the botanical extracts to find out what is in them, and that's a huge project. From the results of that study, we should work to replace all botanical extracts with a mixture of single molecule ingredients; an equally large project.

I understand that we're doing what we can, but whoever presents this to the executive team better be able to explain that the level of effort into this is not appropriate for a company of our level and the list shared list is surely incomplete.

This project is tough; it's rabbit hole, it's never-ending. How long do you research each ingredient before you declare there's no bad press or scientific data?

We're going to continue to use new ingredients at JUUL and that's a key part of our innovation and how we win.

Please don't take my message as harsh on anyone. I'm frustrated that this awesome, important work isn't getting the attention it deserves. I hope this can start the conversation to hire more people into this program.

Here's a short list I made. I'm not providing documentation, just google ecig + any of the listed ingredients and you'll probably find a news article or white paper.

diacetyl
benzaldehyde
oak extract (eugenol)
hay absolute (coumarin)
cocoa extract (caffeine)
butter esters
espresso extract (caffeine)
furfural
Listed compounds with a methyl group (5-methylfurfural)
valerian oil (often has health claims, not allowed in EU)

From: Dan Myers on behalf of Dan Myers <dan@juul.com>
To: Nick Brown
CC: adam@juul.com
Sent: 3/20/2018 9:58:17 PM
Subject: Re: Exec review of "yellow flag" eliquid ingredients

Nick, you are doing a good job. I'm not pleased with the regulatory group and having an incomplete list of chemicals they are requesting information on. And I've made my position clear on my opinion regarding disclosure of the ingredients, and that is a management call on vendor policy. So please don't take my comments as anything negative about what you are doing.

Thanks
Dan

198. Prior to this time, JUUL represented on its website that JUUL had tested its product for safety and operated in accordance with FDA regulation. "JUUL e-liquid and vapor are also tested by an independent lab. PAX Labs

tracks emerging FDA regulation closely, and we support responsible product quality standards."[111]

199. While JUUL falsely represented to consumers that its product was rigorously tested and safe, JUUL knew that its product had not been adequately studied and that JUUL usage came with numerous known risks.

200. JUUL did not include these warnings in its youthful advertising or comments on social media. JUUL never tweeted or posted that use of JUUL "may pose health risks" or that "the medical profession has not had a sufficient period of time to study the long-term health effects of e-cigarette use." Instead, JUUL represented that its product was safe, tested and designed for "cool kids."

VI. JUUL DECEPTIVELY MARKETS ITSELF AS A SMOKING CESSATION PRODUCT AND A MODIFIED RISK TOBACCO PRODUCT.

A. JUUL deceptively markets JUUL as a smoking cessation product, leading adults and youth to believe JUUL is harmless.

201. JUUL has falsely marketed itself as a smoking cessation product, creating the false impression on adults and youth that JUUL is a risk-free proposition.

202. Under Colorado and federal law, e-cigarettes such as JUUL are categorized as "tobacco products."

[111] JUUL website (June 26, 2017), juulvapor.com; Wayback Machine; https://web.archive.org/web/20170606181531/https://www.juulvapor.com/support/faq#can-you-speak-to-the-health-and-safety-of-this-product

203. No tobacco product can be marketed as a smoking cessation product without approval by the FDA. When a new nicotine product is marketed as a way to quit smoking, the product is considered to be a new drug, subject to the requirements of the Federal Food, Drug, and Cosmetic Act, and specifically classified as a nicotine replacement therapy ("NRT") drug.[112] In order to receive approval as an NRT drug, the FDA requires data from clinical studies and efficacy trials that support the manufacturer's assertion that the product is effective in aiding smoking cessation.[113]

204. Additionally, companies that sell tobacco products cannot make claims that their tobacco product is less harmful than other commercially marketed tobacco products without approval as a "modified risk tobacco product" by the FDA. Like the FDA approval process for smoking cessation products, manufacturers must submit scientific research to support their claims, including research related to the effects of the product on tobacco-related diseases and health-related conditions.[114]

205. JUUL has falsely marketed its product as a smoking cessation product and as a modified risk tobacco product, despite never having submitted

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[112] U.S. Department of Health and Human Services, Food and Drug Administration, Center for Drug Evaluation and Research, *Smoking Cessation and Related Indications: Developing Nicotine Replacement Therapy Drug Products, Guidance for Industry* (February, 2019), https://www.fda.gov/regulatory-information/search-fda-guidance-documents/smoking-cessation-and-related-indications-developing-nicotine-replacement-therapy-drug-products.
[113] *Id.*
[114] U.S.C.A. § 387k.

its product to the FDA for review and approval, and without scientific support for these assertions.

206. JUUL's misrepresentations start with the JUUL website, which contains numerous self-serving statements suggesting that JUUL is a smoking cessation product, or a modified risk tobacco product:

- *"Our Mission: Improve the lives of the world's one billion adult smokers."*
- *"JUUL was founded by former smokers, James and Adam, with the goal of improving the lives of the one billion adult smokers. We envision a world where fewer people use cigarettes, and where people who smoke have the tools to reduce or eliminate their consumption entirely, should they so desire."*
- *"As scientists, product designers and engineers, we believe that vaping can have a positive impact when used by smokers and can have a negative impact when used by nonsmokers."*
- *"Letter from Our CEO, How JUUL is advancing comprehensive youth prevention: At JUUL our mission is simple: eliminate cigarette smoking throughout the world one smoker at a time. 38 million Americans and one billion around the world still smoke. Smoking remains the world's number one source of preventable death."*

207. These deceptive statements create the false impressions that JUUL is a "tool" for quitting cigarettes, has been vetted by scientists, saves lives, and is somehow "advancing comprehensive youth prevention."

208. In addition to statements on its website, JUUL created ads which clearly implied that JUUL was a smoking cessation product. JUUL's advertisement "What Parents Need to Know About JUUL," tries to distract from JUUL's aggressive marketing to youth by featuring JUUL's self-serving Mission Statement about "improving" the lives of smokers and "eliminating" cigarettes.

209. Another recent JUUL ad features the word "quit" 30 times, clearly suggesting that JUUL is a smoking cessation product.

210. By advertising itself as both a smoking cessation product and a modified risk tobacco product, JUUL misled youth, parents, and the public in general to believe it was harmless.

211. On May 9, 2019, a consortium of six public health and media organizations, including the American Academy of Pediatrics, the Cancer Action Network, the American Heart Association, the American Lung Association, the Campaign for Tobacco-Free Kids, and the Truth Initiative, sent a letter to the

FDA, urging the FDA to investigate and take enforcement action against JUUL for marketing itself as a smoking cessation product without approval and in violation of the federal Food, Drug and Cosmetic Act.[115]

212. In their letter to the FDA, the health organizations pointed out how JUUL's illegal marketing claims impact adolescents:

> This potential for consumer confusion is especially acute in adolescents. As FDA recognized, "unsubstantiated cessation claims that reach adolescents may confuse teens and lead teens to believe that these products are FDA-approved smoking cessation products . . . .
>
> If teens are led to believe that such claims imply that e-cigarettes are FDA-approved as "safe," teens who do not smoke could be more likely to initiate use of e-cigarettes and teen e-cigarette users may be more likely to continue their use."

213. JUUL's persistent and deceptive messaging about its self-serving "mission" to "improve" lives has misled adolescents and adults to believe that JUUL is safe and creating one more driving factor in the vaping epidemic, particularly among youth.

B. JUUL deceptively engaged in covert digital marketing to create the impression it was a smoking cessation product and harmless.

214. JUUL employed the latest in digital marketing techniques to advertise itself as both a smoking cessation product and as a modified risk tobacco product. In 2016, JUUL worked with advertising technology companies,

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[115] Truth Initiative, *JUUL Marketing Claims of Smoking Cessation*, (May 9, 2019), http://truthinitiative.org.960elmp02.blackmesh.com/sites/default/files/media/files/2019/05/letter-to-FDA-JUUL-cessation-claims_0.pdf.

Zemanta and Trade Desk, to carry out a campaign to increase consumer views of online articles that referenced JUUL as a smoking cessation product, and articles that discussed the health benefits of vaping versus smoking. After consumers read the articles, JUUL then targeted them with digital ads "with the goal of driving visitors to JUUL and to purchase."

215. JUUL tracked the performance of this campaign in a spreadsheet which included the specific categories of "Cessation" and "E-Cig Benefits."

Performance Overview

Category	Site	Impressions	Clicks	CTR	CPC	Homepage Visits	Cost Per Visit	Spend	VTC	CTC	Conversions	Total Revenue	ROAS*	CPA*	Conversion Rate
Cessation	The Trade Desk	212,208	210	0.10%	$4.45	131	$7	$934	0	0	0				
	zemanta.com	5,789,571	39,105	0.68%	$0.15	109	$52	$5,692	5	4	5.25	$302	0.05	$1,084	4.82%
	Total	6,001,779	39,315	0.66%	$0.17	240	$28	$6,626	5	4	5.25	$302	0.05	$1,262	2.19%
Ecig Benefits	The Trade Desk	221,708	155	0.07%	$6.07	106	$9	$941	0	0	0				
	zemanta.com	6,848,663	33,622	0.49%	$0.20	163	$41	$6,745	10	4	6.5	$577	0.09	$1,038	3.99%
	Total	7,070,371	33,777	0.48%	$0.23	269	$29	$7,686	10	4	6.5	$577	0.08	$1,182	2.42%
Industry	The Trade Desk	162,526	121	0.07%	$5.90	86	$8	$714	0	0	0				
	zemanta.com	2,416,451	10,087	0.42%	$0.18	31	$59	$1,839	0	0	0				
	Total	2,578,977	10,208	0.40%	$0.25	117	$22	$2,553	0	0	0				
JUUL Article/Content	The Trade Desk	207,459	122	0.06%	$7.47	79	$12	$911	0	1	1	$34	0.04	$911	1.27%
	zemanta.com	7,769,778	36,036	0.46%	$0.22	1,083	$7	$7,869	9	6	8.25	$497	0.06	$954	0.76%
	Total	7,977,237	36,158	0.45%	$0.24	1,162	$8	$8,780	9	7	9.25	$531	0.06	$949	0.80%
JUUL Articles - Whitelist	zemanta.com	620,852	1,659	0.27%	$0.45	9	$82	$741	1	0	0.25	$18	0.02	$2,963	2.78%
	Total	620,852	1,659	0.27%	$0.45	9	$82	$741	1	0	0.25	$18	0.02	$2,963	2.78%
JUUL Site	zemanta.com	4,268,011	30,708	0.72%	$0.17	12,143	$0.43	$5,270	10	2	4.5	$236	0.04	$1,171	0.04%
	Total	4,268,011	30,708	0.72%	$0.17	12,143	$0.43	$5,270	10	2	4.5	$236	0.04	$1,171	0.04%
Grand Total	Total	28,517,227	151,825	0.53%	$0.21	13,940	$2	$31,656	35	17	25.75	$1,663	0.05	$1,229	0.18%

216. JUUL further created the public misperception that it is a smoking cessation product by paying hundreds of thousands of dollars to Quit Media, LLC, a search engine optimization consultant that operated a fake smoking cessation website under the name "Quit Smoking Community" at http://quitsmokingcommunity.org.[116]

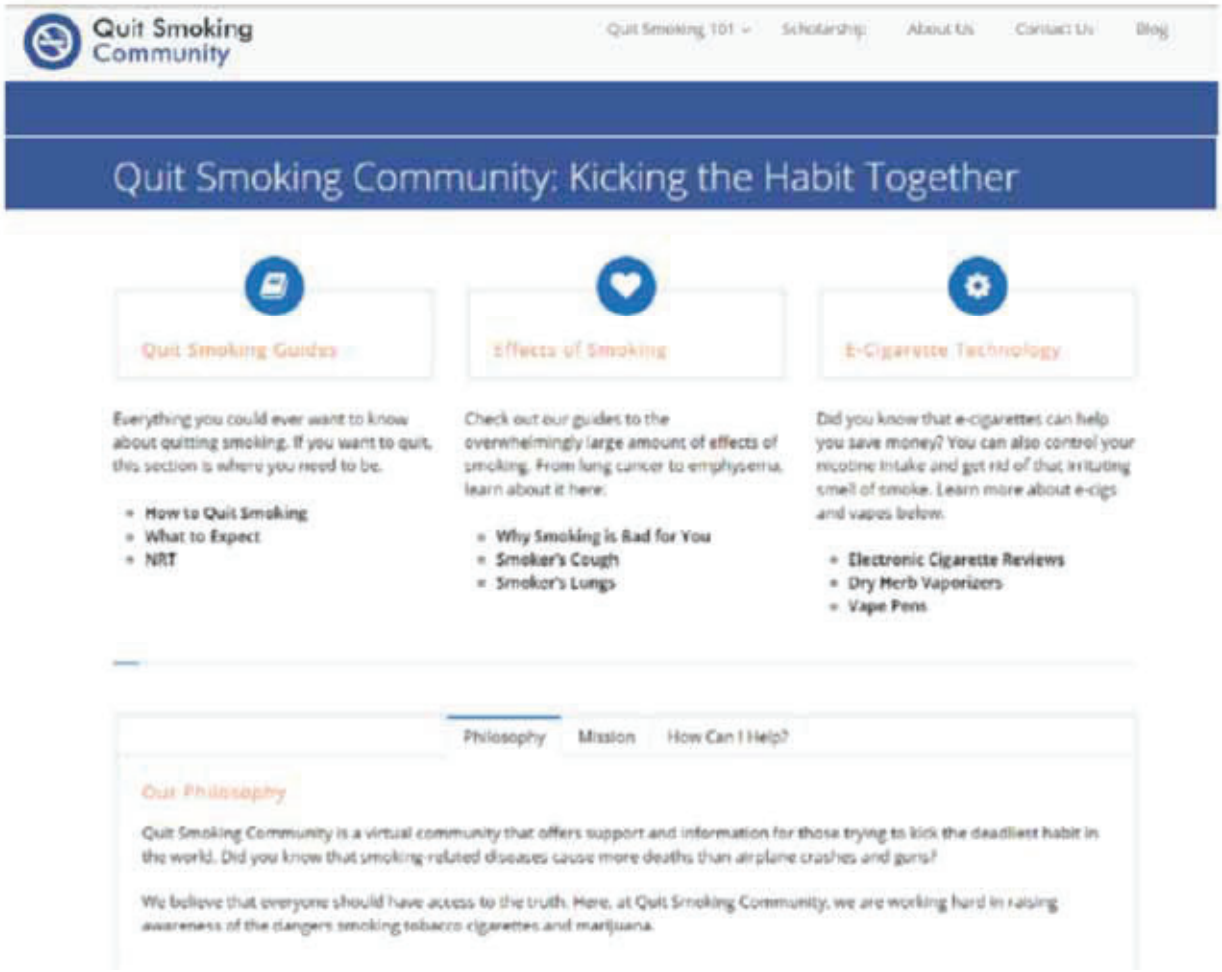
[116] Quit Smoking Community, *Kicking the Habit Together*, https://web.archive.org/web/20170823212459/https://quitsmokingcommunity.org/.

217. Over the past several years, JUUL has paid over $700,000 to Quit Media, LLC, in compensation for each consumer who viewed Quit Media's webpage and subsequently signed up with JUUL for online purchases.

218. The Quit Smoking Community website was designed to appear to be operated by a non-profit organization dedicated to offering support for those trying to quit smoking.[117]

219. Quit Smoking Community's website used a ".org" domain, typically associated with charities and non-profit organizations. Quit Smoking Community's home page declared that Quit Smoking Community was "a virtual community that offers support and information for those trying to kick the deadliest habit in the world." The home page referenced "hotlines," "free quit smoking products," and a "scholarship."[118]

[117] *Id.*
[118] *Id.*



220. The Quit Smoking Community website's "vision" statement reinforced the impression that Quit Smoking Community was a charitable organization that focused on helping people quit smoking:

> Our vision for Quit Smoking Community is to provide a hub where visitors can access information regarding quitting smoking, as well as download resources and tools to help them begin and complete their quit journey. Our website currently receives over 40,000 visitors per day from around the world, and we hope to bring people of different races and nationalities together in the fight against tobacco . . . .
>
> Quit Smoking Community is a small organization. We do not lobby governments or organize fundraisers. Our goal is to simply to build

> a community where smokers work with other smokers to quit together, while ex-smokers give them encouragement and advice.[119]

221. JUUL's communications with Quit Media, LLC clearly show that JUUL hired the company with knowledge that Quit Media was a search engine optimization company that would steer consumers to JUUL's own web page.

222. The Quit Smoking 101 section made deceptive representations that e-cigarettes are modified risk products, describing them as "smoking minus tobacco, the obnoxious smell, virtually all the side-effects and health risks."[120]

223. The Quit Smoking Community website also featured e-cigarette reviews, including a review of JUUL. While the webpage disclosed that Quit Smoking Community received commissions for directing consumers to e-cigarette brands' own websites, the webpage did not disclose what JUUL knew — that the Quit Smoking Community website was a fraud and merely a search engine optimization tool run by an SEO consultant to whom JUUL paid hundreds of thousands of dollars to deceptively represent JUUL's unsubstantiated claims that JUUL is both a smoking cessation product and a modified risk tobacco product.

224. In his July 25, 2019 opening statement before the House Subcommittee on Economic and Consumer Policy, JUUL co-founder James

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[119] *Id.*
[120] *Id.*

Monsees claimed "[t]he product we developed holds the promise to . . . help adult smokers stop smoking combustible cigarettes."[121] Perhaps recognizing that JUUL is not permitted to represent itself as a smoking cessation product, Monsees later stated in that same testimony before Congress, "I can't state more emphatically JUUL is specifically and on purpose not a cessation product."[122]

225. That Monsees would publicly make this mistake is not a surprise. Despite clear awareness of FDA regulations, JUUL has repeatedly and falsely represented itself as a smoking cessation product and a modified risk tobacco product without FDA approval or scientific substantiation.

VII. JUUL'S RECKLESS MARKETING HAS HAD A DEVASTATING EFFECT ON COLORADO SCHOOL LEARNING ENVIRONMENTS.

226. By addicting so many teenagers to its product, JUUL has also had a tremendous negative impact on school learning environments. Thousands of students, who attend school for the purpose of learning, must simultaneously cope with their addiction. Colorado schools, which had seen significant decreases in student smoking, must now deal with the consequences of an addicted student population. The Attorney General, using his *parens patriae* authority, seeks recovery for these damages.

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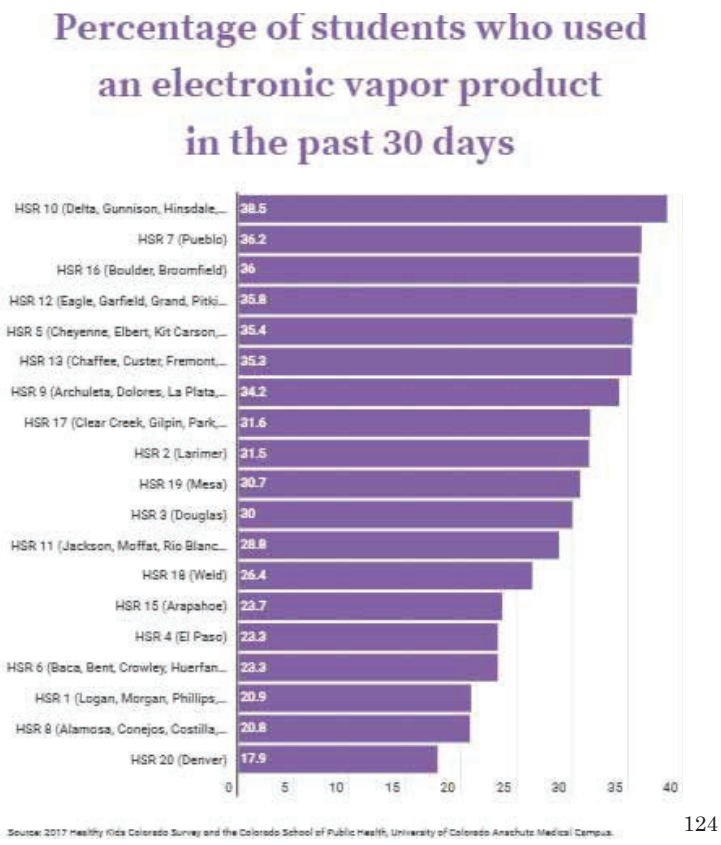
[121] James Monsees, *Examining JUUL's Role in the Youth Nicotine Epidemic*, Testimony before the U.S. House of Representatives Committee on Oversight and Reform Subcommittee on Economic and Consumer Policy (Jul. 24, 2019).

[122] Truth Initiative, *5 Takeaways from the Congressional Hearings on JUUL and the Youth E-cigarette Epidemic* (Aug. 12, 2019), https://truthinitiative.org/research-resources/emerging-tobacco-products/5-takeaways-congressional-hearings-juul-and-youth-e.

227. Students describe an inability to concentrate, teachers describe disruption in the classroom, administrators describe bathrooms and parking lots littered with vaping waste products, and increased demands on school discipline resources, all of which has significantly damaged their school communities and learning environments.[123]

228. No school district in Colorado has escaped the scourge of JUUL and e-cigarettes. The graphic below shows just how widespread and prevalent vaping is among Colorado high schoolers:

[123] Jennifer Brown, *Cigarettes all over again, Colorado has the Highest Youth Vaping Rates in the Country,* Colorado Sun (February 27, 2019), https://coloradosun.com/2019/02/27/cigarettes-all-over-again-colorado-has-the-highest-youth-vaping-rate-in-the-country/; John Daley*, Colorado is a Hotbed of Teen Vaping, But Lacks the Tools to Help Teens Quit*, Colorado Public Radio (July 30, 2019), https://www.cpr.org/2019/07/30/colorado-is-a-hot-bed-of-teen-vaping-but-lacks-the-tools-to-help-kids-quit/; John Daley, *Vaping Took Colorado By Storm, Is the Mystery Threat Enough to Reverse It?* (October 8, 2019), https://www.cpr.org/2019/10/08/teen-vaping-took-colorado-by-storm-is-the-mystery-illness-threat-enough-to-reverse-it/; John Daley, *Vaping Waste is a Whole New Headache for Schools and Cities, Including in Colorado*, Colorado Sun/Colorado Public Radio (December 25, 2019), https://coloradosun.com/2019/12/25/vaping-waste-colorado-schools-cities/; Debbie Kelley, *Teen Vaping Epidemic Continues as Colorado Springs-area Schools Use Students to Educate Peers*, Colorado Springs Gazette (September 25, 2019), https://gazette.com/military/teen-vaping-epidemic-continues-as-colorado-springs-area-schools-use/article_9940f2ce-dfda-11e9-925c-df02ea7b15b2.html.



[124]

229. Horizon High School's experience with JUUL is representative of the experience of schools across Colorado. Located in Thornton, a suburb of Denver, Horizon High School serves approximately 2,000 students in grades 9-12.

230. Horizon High School staff report that the popularity of vaping, and specifically use of JUUL, has exploded in the past few years, creating a serious addiction problem for the students and a detrimental impact on the school community. Horizon High School staff report that:

[124] Jeremy Jojola and Jack Newman, *Clearing the Air: How Vaping Has Clouded Colorado's Skyline,* 9News citing 2017 Healthy Kids Colorado Survey and Colorado School of Public Health,

The vaping trend happened so fast and was so new that the staff and administration had no clue initially what was going on in the school bathrooms, classrooms, hallways and parking lots. ***Affidavit of R.G.***

Vaping has become a status symbol that is associated with popularity and branding. I have observed that smoking cigarettes is not socially acceptable amongst students, but vaping is and it elevates their social status. The JUUL product made vaping popular amongst students. Young people have created their own verb for vaping: "JUULing." Students see JUULing as no different than having the latest iPhone, ear pods or name brand backpack. ***Affidavit of T.P.***

One thing I have observed is that vaping affects all student social groups. Previously with smoking, only certain groups of kids smoked cigarettes. With vaping, we have band students, straight-A students, and athletes using nicotine products. ***Id.***

Six years ago, we could occasionally have reports about one or two students using tobacco on campus. With vaping, that situation has changed to the point where our school bathrooms are inundated with groups of students using and sharing vapes. Parents are communicating with staff that their kids don't feel safe or comfortable going to the restrooms. Horizon does not have the funding or resources to have a full-time bathroom attendant. ***Affidavit of C.G.***

231. Horizon's staff describe a student population that was introduced to JUUL with little knowledge of its addictive qualities:

Students have confided to me that they began vaping because they wanted to try it. Unfortunately, it grabbed a hold of them and now they can't stop. Students tell me that they didn't anticipate getting heavily involved in vaping. Students are hesitant to use the word "addiction." The school has tried to help introduce this concept to students because they don't understand it. They struggle to see the pattern of the dependency. In trying to help students fight this addiction, and become more aware of their dependency, I have them make a mental note every time they reach for their vape. ***Id.***

When discussing vaping, I tell my students that they are the guinea pigs for the vaping industry and that it is no different from the cigarette industry in the 1950's. I believe that students became hooked

on vaping because of the initial marketing ploy that vaping is the "healthy alternative." ***Affidavit of T.P.***

Most students are not aware that vaping is just as addictive as smoking. When I have asked students who vape, if they would smoke a cigarette on campus, they adamantly say "no." Students struggle to see that both contain nicotine. ***Affidavit of R.G.***

Students are addicted to nicotine, but they do not like the word "addicted" because they associate addiction with alcohol and hard drugs. ***Affidavit of T.P.***

The recent increase in media coverage about the dangers of vaping has not decreased students' vaping. Horizon students do not typically get their news from the same sources as adults. Students get their news from social media. ***Affidavit of K.B.***

232. While many students have become aware that nicotine is addictive, many students are unfortunately already addicted.

I recently asked a student why she was vaping. The student told me that she liked that it made her feel "funny" and "different." Other students have told me that they continue hitting a vape until they have tingling fingers and toes. ***Affidavit of T.P.***

I have observed that students who are addicted to vaping have certain behavioral indicators such as being antsier, agitated, irritable, and more frustrated than usual. This typically happens when they are trying to quit vaping or they just cannot vape at the moment. ***Id.***

Horizon has a no tolerance policy for any vaping product or paraphernalia. It is not allowed on campus regardless of age. In my opinion, students are not trying to be defiant about violating the tobacco-free environment when they bring it on campus, but instead the student brings it to school because they feel they need it to get through the day. ***Affidavit of C.G.***

233. As youth vaping continues to surge, it affects not only the individual students, but the entire school community.

Vaping has become somewhat of a cat and mouse game with the students. Students enjoy the "can they catch us" mentality with vaping. A division between the staff and students has been created as a result of vaping. The Horizon staff is not trying to create a culture of mistrust. The majority of students at Horizon are motivated to get their credits and try hard academically. Horizon staff would prefer to show that they believe in the students and that they trust students to make good choices. ***Id.***

I have personally observed the promotion of vaping through social media and social media "challenges." I remember one challenge where students would take a photograph or video of themselves vaping while in a classroom with a teacher in the background. The challenge inflated the student's social media status. These challenges created a "who could get away with what" mentality that inspired more ideas on how students could vape in class without the teacher noticing. ***Affidavit of R.G.***

However, when administration has to break up a group of students that are congregating in the bathroom and bring them into the office to discuss the incident, it naturally creates a divide and mistrust. The administration tries to teach students to use common sense and let them know it looks suspicious if a large group is congregating in the bathroom, given all of the issues with vaping. ***Affidavit of C.G.***

234. While no Colorado school permits tobacco products on campus, enforcement of the rules presents a challenge to staff, and a distraction from the primary mission of educating students. Vaping takes attention away from classroom instruction and creates an atmosphere of mistrust between students and faculty.

Vaping at school can be hard to detect. A typical vaping product does not smell like a cigarette. Many of the vaping products have a fruity smell. Students also chew fruity gum or wear fruity lotions. Some of the vaping products are odorless. ***Affidavit of R.G.***

It is very hard for teachers to catch students vaping. Horizon has a show and tell training for teachers at the beginning of the school year which goes over the signs of vaping. Vaping, however, is so discreet

that it is almost undetectable. I have seen hoodies, backpacks, and bras that are designed to conceal vapes and allow for easy vaping on school grounds. When confronted by Horizon staff, some kids are honest about the vaping product that they possess and voluntarily hand it over to administration. ***Affidavit of T.P.***

The majority of reports about students vaping come from Safe2Tell or students directly telling a Horizon staff member that another student is vaping. Once a report comes in, administration does a "safe school search," where a staff member goes through the student's belongings, and the has the student empty their pockets, take off their shoes, and show the staff member their sock line. A safe school search is conducted when the student is believed to have something on them that is not safe. ***Affidavit of K.B.***

Vaping distracts students and affects the quality of their learning environment. At Horizon, tobacco and vaping products are not allowed in the school or on school grounds. Students who violate these rules are suspended. When a student is suspended, they are removed from that learning environment and may also miss out on other opportunities such as extra-curricular activities. ***Id.***

Vaping has impacted our school community, our students' health, and their academics. Students who are caught with vaping products may be taken out of school which in turn negatively impacts their classroom learning. This is not what we want for our students. Administrators and teachers want students to view them as trusted partners not as punitive authoritarians. ***Affidavit of C.G.***

235. Addressing the problems that JUUL has wrought on Colorado schools will require significant funding. Schools will need technology, such as vape detectors, to keep JUUL out of schools.

Horizon has looked into purchasing vape detectors. One school in our district is piloting vape detectors and has reported that the technology is not quite there yet as they have many false reports. This is first generation technology and it still has a long way to go. These detectors are expensive and the cost is too high for technology that is not quite ready. ***Affidavit of R.G.***

236. Colorado students, and adults, will also need access to cessation programs, whether in schools or elsewhere, to help quit their addiction to JUUL.[125]

> *I have talked with numerous students who admit to being highly addicted to vaping and are seeking help to stop. Currently, the only resource that is available for students wanting to quit vaping is a smoking cessation class. I believe we need more free resources and programs. I see students everyday who want help and are not able to find a program or person to help them quit.* ***Id.***

237. Horizon staff report that Horizon High School students continue to use JUUL as a result of JUUL's social media marketing and the fact that JUUL was the "groundbreaker."

CONCLUSION

238. In June 2018, the Colorado Department of Public Health and Environment released the results of its Healthy Kids Colorado Survey. The survey sampled 56,000 youth from 190 randomly selected middle and high schools statewide and found that 27.5% of Colorado's high school students

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[125] Jennifer Brown, *Cigarettes all over again, Colorado has the Highest Youth Vaping Rates in the Country,* Colorado Sun (February 27, 2019), https://coloradosun.com/2019/02/27/cigarettes-all-over-again-colorado-has-the-highest-youth-vaping-rate-in-the-country/; John Daley*, Colorado is a Hotbed of Teen Vaping, But Lacks the Tools to Help Teens Quit*, Colorado Public Radio (July 30, 2019), https://www.cpr.org/2019/07/30/colorado-is-a-hot-bed-of-teen-vaping-but-lacks-the-tools-to-help-kids-quit/; John Daley, *Vaping Took Colorado By Storm, Is the Mystery Threat Enough to Reverse It?* (October 8, 2019), https://www.cpr.org/2019/10/08/teen-vaping-took-colorado-by-storm-is-the-mystery-illness-threat-enough-to-reverse-it/; John Daley, *Vaping Waste is a Whole New Headache for Schools and Cities, Including in Colorado*, Colorado Sun/Colorado Public Radio (December 25, 2019), https://coloradosun.com/2019/12/25/vaping-waste-colorado-schools-cities/; Debbie Kelley, *Teen Vaping Epidemic Continues as Colorado Springs-area Schools Use Students to Educate Peers*, Colorado Springs Gazette (September 25, 2019), https://gazette.com/military/teen-vaping-epidemic-continues-as-colorado-springs-area-schools-use/article_9940f2ce-dfda-11e9-925c-df02ea7b15b2.html.

vaped. The survey's data captured what parents, schools and teens already knew: that Colorado had been laid siege by one of the most reckless and devastating marketing campaigns ever carried out by a corporate entity against youth. At the time of the survey's release, JUUL was on its way to earning a record-breaking $1.3 billion in revenue for 2018.

239. The alarming youth vaping statistics explain Colorado's grave concern, the $1.3 billion in revenue explains JUUL's lack of concern. One month after the release of the Healthy Kids Colorado Survey, JUUL's CEO casually suggested in an email from his iPhone that JUUL should start looking into what percentage of JUUL's revenue came from underaged users.

From: Kevin Burns on behalf of Kevin Burns <kburns@juul.com>
To: Ashley Gould; Ann Hoey; Matt David; Vittal Kadapakkam; Tim Danaher; Rasmus Wissmann
Sent: 7/3/2018 6:00:46 PM
Subject: Polling

We should discuss overall behavioral study roadmap and also what we are going to do re polling youth usage rates

Our proposed youth study (late in the year) will likely give us some sense of ever use rate and use patterns - but we still need to probe on the question re what the overall % of our users and revenue is coming from underage users.

Vittal - we still need to have a debrief for D1 and Darsana on their polling results. Who's leading this? Would like to get insights from their work and also understand what polling providers they used

Thx

Sent from my iPhone

240. It is not clear if JUUL ever completed its "youth study," as proposed for late 2018, or whether it answered its own questions about what percentage of its users were underaged, and what percentage of its revenue came from underaged users. What is clear is that JUUL has enjoyed tremendous profits

while causing tremendous harm to the State of Colorado by recklessly and deceptively marketing its unnecessary and highly addictive product, particularly to Colorado youth.

CLAIMS FOR RELIEF

241. Plaintiff incorporates herein by reference all allegations set forth above in each of the following Claims for Relief.

FIRST CLAIM FOR RELIEF
(Public Nuisance)

242. By engaging in the conduct described in this Complaint, JUUL created a public nuisance of youth and adult addiction that substantially, significantly and unreasonably interferes with the well-being of the Colorado public and its health, safety and welfare.

243. Before JUUL's market entry, the United States, including Colorado, made significant gains in preventing youth access and addiction to tobacco products. Now, as the result of JUUL's unconscionable marketing of its unnecessary and addictive product, coupled with an intentional disregard for the well-being of Colorado's citizens and their health, safety and welfare, large percentages of Colorado's youngest citizens use e-cigarettes. Addiction to JUUL has impacted Colorado youth, their families, and Colorado schools and other institutions. Colorado has incurred damages and will continue to incur damages and costs of remediation into the future, as a direct result of the public nuisance created by JUUL.

SECOND CLAIM FOR RELIEF
(Knowingly or recklessly engages in any unfair, unconscionable, deceptive, deliberately misleading, false, or fraudulent act or practice, C.R.S. § 6-1-105(1)(kkk))

244. JUUL has engaged in numerous deceptive trade practices, each constituting separate violations of C.R.S. § 6-1-105(1)(kkk).

245. JUUL unfairly and unconscionably, knowingly and recklessly, advertised the sale of an addictive, ultrahigh nicotine product, particularly to youth, through multiple means of advertising including, but not limited to, digital, social media and influencer advertising. This advertising created the impression that JUUL was a "cool" product with a focus on images, messages, and design that appealed to youth.

246. JUUL knew that its product was highly addictive, and that youth were particularly vulnerable. JUUL knew that the various states in this country, including Colorado, had long fought for protections against the nicotine and tobacco companies' efforts to maintain sales generally and target youth to obtain long-term profits for their addictive products. Armed with this knowledge, JUUL devised an unconscionable marketing strategy and moved swiftly to addict as many youths as possible to its product.

247. JUUL unfairly and unconscionably, knowingly and recklessly, marketed and sold flavored versions of an addictive, ultrahigh nicotine product despite warnings and evidence that flavors were a leading cause of youth initiation into e-cigarettes.

248. JUUL knew that research proved that youth were attracted to sweet and fruity flavors of e-cigarettes. JUUL knew that federal regulations prohibited the sale of flavored tobacco products as part of its efforts to prevent youth initiation. JUUL knew that the federal government had warned the e-cigarette industry to not target youth with flavored e-cigarettes. Despite this knowledge, JUUL unfairly and unconscionably worked to discredit research that flavored e-cigarettes led to youth initiation.

249. JUUL unfairly and unconscionably, knowingly and recklessly, downplayed the presence of nicotine in its product to make it more appealing, particularly to youth.

250. JUUL knew that tobacco companies were required to disclose the presence of nicotine in their tobacco products along with a warning that nicotine is an addictive chemical. JUUL knew these requirements were put in place by the federal government to protect consumers, particularly young consumers, from the dangers of nicotine addiction. Armed with this knowledge, JUUL misleadingly, unfairly, and unconscionably marketed its product without disclosing the presence of nicotine in JUUL and without warning that nicotine is an addictive chemical.

251. JUUL unfairly and unconscionably, knowingly and recklessly, concealed the nicotine levels in its product to increase the appeal of its product, particularly to youth.

252. JUUL knew that its product contained unprecedented levels of nicotine, a highly addictive chemical. JUUL knew that it was industry standard to measure and disclose nicotine content by volume and instead measured its nicotine content by weight and deceptively represented its nicotine concentration as "5% strength," instead of 59 mg/ml, a more standard and correct measurement. JUUL's actions were both misleading and unconscionable in that it knew that these ultrahigh nicotine levels would increase the speed by which consumers, particularly young people, would become addicted to its product, and the strength of their addiction.

253. JUUL unfairly and unconscionably, knowingly and recklessly, marketed and sold an addictive nicotine product while refusing to set up a proper age-verification system to prevent underaged users from purchasing JUUL.

254. JUUL knew that such a proper age-verification system was necessary to prevent youth access to JUUL. JUUL was aware that youth were successfully circumventing its lax age-verification systems for online purchases. JUUL unfairly and unconscionably refused to set up such a system because it feared that a proper age-verification system would impede its sales.

255. JUUL unfairly and unconscionably, knowingly and recklessly, provided youth with easy access to JUUL devices, through a deficient and lax device warranty replacement policy.

256. JUUL knew that youth were obtaining JUUL devices through its lax warranty replacement system and failed to take steps to stop youth access. JUUL knew that youth could easily circumvent its lax age-verification system in combination with its lax warranty replacement system. By refusing to set up a proper age-verification system and handing out thousands of JUUL devices without any proof that a device was actually broken, JUUL unfairly, unconscionably and knowingly allowed and facilitated consumer, particularly youth, access to its product.

257. JUUL unfairly and unconscionably, knowingly and recklessly, marketed its product to youth by sending marketing emails without verifying that the recipients were of legal age to purchase tobacco products, including e-cigarettes such as JUUL.

258. JUUL knew that underaged youth were obtaining and using JUUL's products and yet it unconscionably continued to send out marketing emails despite awareness that it had not age-verified the recipients.

259. JUUL unfairly and unconscionably, knowingly and recklessly, failed to disclose that heating and inhaling two of its primary ingredients, propylene glycol and glycerol, creates significant health risks and that these ingredients have not been approved for human inhalation. Instead, JUUL falsely represented that its primary ingredients, propylene glycol and glycerol, were safe for inhalation.

260. JUUL knew that its primary ingredients were industrial solvents and had not been tested or approved for inhalation. JUUL knew that chemical manufacturers such as Dow Chemical advised against inhaling propylene glycol. JUUL knew, from a study carried out by Altria, that inhalation of propylene glycol had adverse effects on the blood composition of animals and should not be considered safe for human inhalation. JUUL knew that ongoing research showed that inhalation of propylene glycol and glycerol had negative effects on the immunological response of human lungs. Despite knowing that heating propylene glycol and glycerol creates dangerous byproducts and significant health risks when inhaled, JUUL unconscionably represented its product as safe for inhalation. JUUL knew that propylene glycol and glycerol were considered by the FDA to be GRAS (Generally Recognized as Safe) ingredients when used in limited amounts for oral consumption, as in toothpaste. Despite knowing that consumers would inhale propylene glycol and glycerol, JUUL falsely and unconscionably likened the use of propylene glycol and glycerol in JUUL to a known-safe product, toothpaste, where the ingredients propylene glycol and glycerol have a different intended use.

261. JUUL unfairly and unconscionably, knowingly and recklessly, made deliberately misleading and false statements about the presence of the byproduct formaldehyde associated with its product.

262. Formaldehyde is a known carcinogen. When consumers inquired whether JUUL's e-liquids produced formaldehyde, JUUL responded through

advertising, social media, and its website that "[w]e do not add chemicals of concern on key FDA lists such as formaldehyde." This answer is unconscionable and deliberately false and misleading in that JUUL's e-liquids inherently contain formaldehyde and create additional formaldehyde as they are heated.

263. JUUL unfairly and unconscionably, knowingly and recklessly, made deliberately misleading and false statements about the presence of diacetyl in its product, a chemical compound that has been shown to have negative impacts on human lungs when inhaled, causing a condition known as "popcorn lung."

264. JUUL knew that its own testing showed the presence of diacetyl in its Cool Mint flavor. When consumers inquired whether JUUL's e-liquids produced diacetyl, JUUL responded through advertising, social media and its website that "[a]s a policy, our development and manufacturing process does not add diacetyl . . . as flavor ingredients." This answer is unconscionable, false, and deliberately misleading in that JUUL's own testing showed the presence of diacetyl in its product.

265. JUUL unfairly and unconscionably, knowingly and recklessly, marketed flavors while failing to disclose that its flavors contain numerous chemical compounds, and that heating these chemical compounds creates toxic byproducts with both known and unknown health risks to consumers who inhale them.

266. Despite knowing that its flavors contain numerous chemical compounds and that consumers will heat and inhale these chemical compounds

and their byproducts into their lungs, JUUL unconscionably marketed these flavors while failing to disclose the names of these chemical compounds in its product, and the risks associated with heating and inhaling these chemicals, to consumers.

267. JUUL unfairly and unconscionably, knowingly and recklessly, made deliberately misleading and false statements that its product has been evaluated for safety and is safe.

268. JUUL unfairly and unconscionably represented that its product had been tested by independent labs and for safety, when in fact it failed to fully test or evaluate its product for dangerous chemicals until 2018. JUUL knew that the limited testing performed by JUUL indicated the presence of dangerous chemicals and dangerous chemical byproducts in its product, even when used as designed, and that it was false and unconscionable to represent its product as fully evaluated for safety and safe.

269. JUUL unfairly and unconscionably, knowingly and recklessly, marketed its product as a smoking cessation product and a modified risk product without scientific substantiation, creating the impression with youth that the product was harmless and risk-free.

270. JUUL knew that it was unlawful to market a tobacco product, such as JUUL, using claims of smoking cessation and modified risk, without submitting scientific support for these claims to the FDA and obtaining FDA approval. Armed with this knowledge, JUUL unfairly and unconscionably

marketed its product as a smoking cessation and a modified risk tobacco product without scientific substantiation, through its influencer program, through digital marketing, social media, through a fake smoking cessation website, and through direct advertising.

271. By means of the above-described unlawful trade practices, JUUL has deceived, misled, unlawfully acquired money, and harmed Colorado consumers in violation of C.R.S. § 6-1-105(1)(kkk).

THIRD CLAIM FOR RELIEF
(Fails to disclose material information concerning goods which information was known at the time of an advertisement or sale if such failure to disclose such information was intended to induce the consumer to enter into a transaction, C.R.S. § 6-1-105(1)(u))

272. JUUL engaged in numerous deceptive trade practices, each constituting separate violations of C.R.S. § 6-1-105(1)(u).

273. JUUL failed to disclose to its consumers that its product contained nicotine and that nicotine is an addictive chemical.

274. JUUL knew that its product contained nicotine, and that nicotine is an addictive chemical. Despite that knowledge, JUUL failed to properly disclose those facts, deceiving consumers into purchasing its product.

275. JUUL failed to accurately disclose the ultrahigh levels of nicotine in its product.

276. JUUL knew that its product contained several times the nicotine levels of existing e-cigarettes at the time it introduced its product on the market. JUUL knew that it was industry standard to measure and disclose nicotine

content by volume, and instead measured its nicotine content by weight, and deceptively represented and concealed its nicotine concentration as "5% strength," instead of 59 mg/ml, a more standard and correct measurement, deceiving consumers into purchasing its product.

277. JUUL failed to disclose that heating and inhaling two of its primary ingredients, propylene glycol and glycerol, creates significant health risks and that these ingredients have not been approved for human inhalation.

278. JUUL knew that its primary ingredients were industrial solvents and had not been tested or approved for inhalation. JUUL knew that chemical manufacturers such as Dow Chemical advised against inhaling propylene glycol. JUUL knew, from a study carried out by Altria, that inhalation of propylene glycol had adverse effects on the blood composition of animals and should not be considered safe for human inhalation. JUUL knew that ongoing research showed that inhalation of propylene glycol and glycerol had negative effects on the immunological response of human lungs. Despite knowing that heating propylene glycol and glycerol creates dangerous byproducts and significant health risks when inhaled, JUUL failed to disclose these facts and risks to the public in order to ensure sales of its product.

279. JUUL failed to disclose that heating its primary ingredients creates dangerous byproducts, such as formaldehyde.

280. Despite knowing that heating propylene glycol and glycerol creates dangerous byproducts, such as formaldehyde, and that consumers will inhale

these byproducts into their lungs, JUUL failed to disclose this fact to the public in order to ensure sales of its product.

281. JUUL failed to disclose that its flavors contain numerous chemical compounds, and that heating and inhaling these chemical compounds creates toxic byproducts with both known and unknown health risks to consumers.

282. Despite knowing that its flavors contain numerous chemical compounds and that consumers will heat and inhale these chemical compounds and their byproducts into their lungs, JUUL failed to disclose the names of these chemical compounds in its product, and the risks associated with heating and inhaling these chemicals, to consumers in order to ensure sales of its product.

283. JUUL failed to disclose that some of its e-liquids contain diacetyl, a chemical compound that has been shown to have negative impacts on human lungs when inhaled, causing a condition known as ”popcorn lung.”

284. JUUL knew that its own testing showed the presence of diacetyl in its Cool Mint flavor. JUUL failed to disclose the presence of diacetyl in its Cool Mint flavor in order to ensure sales of its product.

285. By means of the above-described unlawful trade practices, JUUL has deceived, misled, unlawfully acquired money, and harmed Colorado consumers in violation of C.R.S. § 6-1-105(1)(u).

FOURTH CLAIM FOR RELIEF

(Knowingly or recklessly makes a false representation as to the characteristics, ingredients, uses, benefits, alterations, or quantities of goods, or a false representation as to the sponsorship, approval, status, affiliation, or connection of a person therewith, C.R.S. § 6-1-105(1)(e))

286. JUUL engaged in numerous deceptive trade practices, each constituting separate violations of C.R.S. § 6-1-105(1)(e).

287. JUUL knowingly, recklessly, and falsely represents the concentration and quantity of its nicotine ingredient.

288. JUUL knew that each of its e-liquids contained a nicotine concentration of approximately 59 mg/ml, and if represented as a percentage, is correctly stated as 5.9%. JUUL falsely represented its nicotine content as "5% nicotine strength."

289. JUUL knowingly, recklessly, and falsely represented that its primary ingredients, propylene glycol and glycerol, are safe for inhalation.

290. JUUL knew that its primary ingredients were industrial solvents and had not been tested or approved for inhalation. JUUL knew that chemical manufacturers such as Dow Chemical advised against inhaling propylene glycol. JUUL knew, from a study carried out by Altria, that inhalation of propylene glycol had adverse effects on the blood composition of animals and should not be considered safe for human inhalation. JUUL knew that ongoing research showed that inhalation of propylene glycol and glycerol had negative effects on the immunological response of human lungs. JUUL knew that propylene glycol and glycerol were considered by the FDA to be GRAS (Generally Recognized as Safe) ingredients when used in limited amounts for oral consumption, as in toothpaste. Despite knowing that consumers would inhale propylene glycol and

glycerol, JUUL falsely likened the use of propylene glycol and glycerol in JUUL to a known-safe product, toothpaste, where the ingredients propylene glycol and glycerol have a different intended use.

291. JUUL knowingly, recklessly, and falsely represented the presence of the byproduct formaldehyde associated with its product.

292. Formaldehyde is a known carcinogen. When consumers inquired whether JUUL's e-liquids produced formaldehyde, JUUL responded through advertising, social media and its website that "[w]e do not add chemicals of concern on key FDA lists such as formaldehyde." This answer is false and misleading in that JUUL's e-liquids inherently contain formaldehyde and create additional formaldehyde as they are heated.

293. JUUL knowingly, recklessly, and falsely represented the presence of diacetyl in its product, a chemical compound that has been shown to have negative impacts on human lungs when inhaled, causing a condition known as "popcorn lung."

294. JUUL knew that its own testing showed the presence of diacetyl in its Cool Mint flavor. When consumers inquired whether JUUL's e-liquids produced diacetyl, JUUL responded through advertising, social media, and its website that "[a]s a policy, our development and manufacturing process does not add diacetyl . . . as flavor ingredients." This answer was false and misleading in that JUUL's own testing showed the presence of diacetyl in its product.

295. JUUL knowingly, recklessly, and falsely represented itself as a smoking cessation product and a modified risk tobacco product.

296. JUUL knew that it was unlawful to market a tobacco product, such as JUUL, using claims of smoking cessation and modified risk, without submitting scientific support for these claims to the FDA and obtaining FDA approval. Despite that knowledge, JUUL falsely marketed its product as a smoking cessation and modified risk tobacco product without scientific substantiation, through its influencer program, through digital marketing, social media, through a fake smoking cessation website, and through direct advertising.

297. JUUL knowingly, recklessly, and falsely represented that its product has been evaluated for safety and is safe.

298. JUUL represented that its product had been tested by independent labs and for safety, when in fact it failed to fully test or evaluate its product for dangerous chemicals until 2018. JUUL knew that the limited testing performed by JUUL indicated the presence of dangerous chemicals, and dangerous chemical byproducts in its product, even when used as designed, and that it was false to represent its product as fully evaluated for safety and safe.

299. By means of the above-described unlawful trade practices, JUUL has deceived, misled, unlawfully acquired money, and harmed Colorado consumers in violation of C.R.S. § 6-1-105(1)(e).

FIFTH CLAIM FOR RELIEF

(Knowingly or recklessly makes a false representation as to the source, sponsorship, approval, or certification of goods, services, or property, C.R.S. § 6-1-105(1)(b))

300. JUUL engaged in numerous deceptive trade practices, each constituting separate violations of C.R.S. § 6-1-105(1)(b).

301. JUUL knowingly and recklessly represented that its primary ingredients, propylene glycol and glycerol, are found in common products like toothpaste, a known-FDA-approved product, falsely implying that these ingredients are approved by the FDA for inhalation.

302. JUUL knew that its primary ingredients were industrial solvents that have not been tested or approved for inhalation. JUUL knew that chemical manufacturers such as Dow Chemical advised against inhaling propylene glycol. JUUL knew, from a study carried out by Altria, that propylene glycol had adverse effects on the blood composition of animals and should not be considered safe for human inhalation. JUUL knew that ongoing research showed that inhalation of propylene glycol and glycerol had negative effects on the immunological response of human lungs. JUUL knew that propylene glycol and glycerol were considered by the FDA to be GRAS (Generally Recognized as Safe) ingredients when used in limited amounts for oral consumption, as in toothpaste. Despite knowing that consumers will inhale propylene glycol and glycerol, JUUL falsely likened the use of propylene glycol and glycerol in JUUL to that of known FDA-approved uses of propylene glycol and glycerol, such as in

toothpaste, where propylene glycol and glycerol have a different intended use and will not be inhaled.

303. JUUL knowingly, recklessly, and falsely represented that the JUUL product and the chemicals in JUUL comply with FDA and other governmental standards.

304. When consumers inquired whether JUUL's e-liquids produced formaldehyde, JUUL responded through advertising, social media and its website that "[w]e do not add chemicals of concern on key FDA lists such as formaldehyde." JUUL's website made similar statements to the effect that JUUL prohibits chemical ingredients that appear on the FDA list of Harmful and Potentially Harmful Constituents (HPHCs). These representations are false and misleading in that JUUL e-liquids inherently contain numerous chemical compounds, including formaldehyde, and create additional byproducts, such as formaldehyde, when they are heated.

305. JUUL knowingly, recklessly, and falsely represented itself as a smoking cessation product and a modified risk tobacco product — representations that implied that JUUL has sought and received FDA approval.

306. JUUL knew that it was unlawful to market a tobacco product, such as JUUL, using claims of smoking cessation and modified risk, without submitting scientific support for these claims to the FDA and obtaining FDA approval. Despite that knowledge, JUUL falsely marketed its product as a smoking cessation and modified risk tobacco product, without scientific

substantiation, through its influencer program, through digital marketing, through social media, through a fake smoking cessation website, and through direct advertising. By marketing in this manner, JUUL implicitly represented that it was an FDA-approved smoking cessation product and a modified risk tobacco product.

307. By means of the above-described unlawful trade practices, JUUL has deceived, misled, acquired money, and harmed Colorado consumers in violation of C.R.S. § 6-1-105(1)(b).

RELIEF REQUESTED

WHEREFORE, Plaintiff prays for judgment against Defendant JUUL and the following relief:

A. An order declaring that JUUL's above-described conduct constitutes a public nuisance, and permanently enjoining JUUL from continuing in the acts, practices, and conduct that created the public nuisance.

B. An order requiring JUUL to pay damages to the State of Colorado resultant from the public nuisance it created, including damages necessary to abate the public nuisance it created, including, but not limited to, funding youth vaping cessation and prevention programs.

C. An order declaring JUUL's conduct to be in violation of the Colorado Consumer Protection Act, C.R.S. §§ 6-1-105(1)(kkk), (e), (u), and (b).

D. An order and judgment to prevent the use and employment of the deceptive trade practices described in this complaint and which are necessary to completely compensate the State of Colorado, its institutions, and any person injured by means of any such practice and to prevent unjust enrichment by JUUL through the use or employment of any deceptive trade practice. Such relief shall include a judgment in an amount to be determined at trial for restitution, disgorgement, or other equitable relief, including injunctive relief,

pursuant to C.R.S § 6-1-110(1). Such equitable relief shall include payment necessary to reverse the injury and harm JUUL has created, including, but not limited to, funding age-appropriate vaping cessation and prevention programs, funding counter advertising and social media programs to counter the pervasive message and addiction that JUUL has unleashed, and funding of other health-related programs as needed to address the risks and harms of vaping use and addiction.

E. An order permanently enjoining Defendant JUUL, and its officers, directors, successors, assigns, agents, employees, and anyone in active concert or participation with JUUL with notice of such injunctive orders, from engaging in any deceptive trade practices as defined in and proscribed by the CCPA and as set forth in this Complaint.

F. An order requiring JUUL to forfeit and pay civil penalties pursuant to C.R.S. § 6-1-112(1)(a) and C.R.S. § 6-1-112(1)(c) of the CCPA.

G. An order requiring JUUL to pay the costs and expenses of this action incurred by the Attorney General, including, but not limited to, expert costs and attorney fees, pursuant to C.R.S. § 6-1-113(4).

H. Any such further orders as the Court may deem just and proper to effectuate the purposes of the CCPA.

JURY DEMAND

THE STATE OF COLORADO DEMANDS A JURY ON ALL ISSUES SO TRIABLE

Respectfully submitted this 7th day of July, 2020.

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