Supplementary Material

Article Title: Changes in Industry Marketing of Electronic Nicotine Delivery Systems on Social Media Following FDA’s Prioritized Enforcement Policy: A Content Analysis of Instagram and Twitter Posts

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# Supplementary Data

The author’s own analyses, calculations, and conclusions were informed in part by the NielsenIQ RMS data through NielsenIQ’s Retail Measurement Service (RMS) for the Tobacco Alternatives Vapor category for the (a) 52-week time period from December 30, 2018 through the week ending December 28, 2019 and (b) 28-week time period from November 3, 2019 through week ending May 16, 2020 for Total U.S. Expanded All Outlets Combined (xAOC) and convenience stores are those of FDA and do not reflect the views of NielsenIQ. NielsenIQ is not responsible for, had no role in, and was not involved in analyzing and preparing the results reported herein, or in developing, reviewing, or confirming the research approaches used in connection with this report. NielsenIQ RMS data consist of weekly purchase and pricing data generated from participating retail store point-of-sale systems in all U.S. markets. See http://www.NielsenIQ.com/global/en/ for more information.

# Supplementary Figures and Tables

S1 Table: Top ENDS Brands’ Posting Frequency on Social Media, Overall and by Platform

| Brand ID Information | Pre-policy | Post-policy | Total |
| --- | --- | --- | --- |
| Brand Name | Instagram Followers | Twitter Followers | Posts | Posts in Sample | Posts | Posts in Sample | Posts | Posts in Sample |
| Aime Pods | 3,714 | z- | 1 | 1 | 63 | 3 | 64 | 4 |
| Aspire | z- | 15,720 | 366 | 3 | 325 | 3 | 691 | 6 |
| Blu eCigs | z- | 22,912 | 43 | 2 | 114 | 3 | 157 | 5 |
| BO Vaping | 6,109 | z- | 1 | 1 | 0 | 0 | 1 | 1 |
| Cali Vape Pods | z- | 16 | 54 | 3 | 19 | 3 | 73 | 6 |
| CCEL Official | 32,851 | 328 | 43 | 4 | 36 | 5 | 79 | 9 |
| Clean Cig | z- | 388 | 15 | 3 | 5 | 3 | 20 | 6 |
| Dinner Lady E-Liquids | 58,034 | z- | 70 | 3 | 74 | 3 | 144 | 6 |
| DynaVap | z- | 2,070 | 0 | 0 | 86 | 3 | 86 | 3 |
| Eleaf Global | 182,092 | 11,642 | 257 | 6 | 397 | 6 | 654 | 12 |
| ePuffer | 20,485 | 2,204 | 9 | 6 | 2 | 2 | 11 | 8 |
| Exxus Vape | 9,667 | 194 | 45 | 6 | 12 | 3 | 57 | 9 |
| FEELM Tech | 8,630 | 1,402 | 60 | 6 | 53 | 6 | 113 | 12 |
| Freemax Vape | 79,607 | 4,950 | 421 | 6 | 476 | 6 | 897 | 12 |
| Geekvape  | 562,690 | 14,230 | 411 | 6 | 269 | 5 | 680 | 11 |
| GreenSmartLiving | 10,278 | 85 | 40 | 6 | 34 | 6 | 74 | 12 |
| Imperial Vapor Co, | 1,562 | 356 | 136 | 6 | 65 | 6 | 201 | 12 |
| Innokin Technology | 104,558 | 14,882 | 335 | 6 | 257 | 6 | 592 | 12 |
| JUUL | z- | 28,224 | 1 | 1 | 0 | 0 | 1 | 1 |
| KangerTech | 53,957 | z- | 32 | 3 | 29 | 3 | 61 | 6 |
| MiO | z- | 7 | 47 | 3 | 74 | 3 | 121 | 6 |
| Mistic Ecigs | 3,173 | z- | 7 | 3 | 4 | 3 | 11 | 6 |
| Mojo America | 8,029 | z- | 13 | 3 | 1 | 1 | 14 | 4 |
| Mr. Freeze E-Liquids | 16,756 | z- | 54 | 3 | 26 | 3 | 80 | 6 |
| Pod Juice Salts | 26,238 | 303 | 157 | 6 | 38 | 6 | 195 | 12 |
| Posh | 1,052 | z- | 23 | 3 | 2 | 2 | 25 | 5 |
| Prophet Premium | n/a | 1,584 | 103 | 4 | 70 | 4 | 173 | 8 |
| Puff Bar | z- | 334 | 0 | 0 | 311 | 4 | 311 | 4 |
| Puff E-Cig | 3,783 | z- | 0 | 0 | 1 | 1 | 1 | 1 |
| Puff Labs E-Liquid | 14,340 | z- | 25 | 3 | 30 | 3 | 55 | 6 |
| Sigelei | 130,270 | z- | 99 | 3 | 24 | 3 | 123 | 6 |
| SMOK | z- | 36,601 | 36 | 3 | 45 | 3 | 81 | 6 |
| Suorin USA | 934 | z- | 2 | 2 | 0 | 0 | 2 | 2 |
| The Jones | 23,959 | 298 | 32 | 6 | 19 | 3 | 51 | 9 |
| Vape Wild E-Juice | n/a | 14,201 | 68 | 6 | 45 | 6 | 113 | 12 |
| Vapin Plus | z- | 69 | 0 | 0 | 1 | 1 | 1 | 1 |
| Vapor4Life | z- | 11,652 | 0 | 0 | 1 | 1 | 1 | 1 |
| Vaporesso | z- | 10,372 | 245 | 3 | 255 | 3 | 500 | 6 |
| Vikings Vape | 1,216 | z- | 7 | 3 | 0 | 0 | 7 | 3 |
| VOLCANO eCigs | 18,667 | 3,359 | 115 | 6 | 70 | 6 | 185 | 12 |
| VOOPOO | 484,067 | z- | 55 | 4 | 250 | 2 | 305 | 6 |
| Vozol | 2,483 | z- | 85 | 3 | 101 | 3 | 186 | 6 |
| White Cloud | 1,178 | 2,929 | 11 | 4 | 0 | 0 | 11 | 4 |
| White Horse Vapor | 1,155 | z- | 1 | 1 | 0 | 0 | 1 | 1 |
| Wulf Mods | z- | 1,851 | 6 | 2 | 3 | 2 | 9 | 4 |
| ZampleBox | 76,676 | 20,259 | 127 | 6 | 107 | 6 | 234 | 12 |

S2 Table: Flavor Coding

The coders utilized a coding hierarchy to code flavors referenced in posts. The coders reviewed image and/or post text and recorded the flavor categories present for each product type.

|  |  |
| --- | --- |
| Flavor Category Definition | Example Flavor Language in Post |
| Flavor: Explicit flavors other than “menthol,” “mint,” or “tobacco,” including pairing of these flavors with menthol, mint, and tobacco (e.g., strawberry menthol) | Acai, apple, apple frost, apple menthol, banana, banana caramel, banana frost, banana ice, blood orange, blueberry bomb, blueberry cheesecake, blueberry ice, British berry, café con leche, caramel popcorn, clove, mango, mango frost, mango ice, mango lychee, orange creamsicle, papaya pineapply, peach menthol, strawberry lemonade, suntan mango, sweet strawberry, tropical mango, vanilla cream, watermelon |
| Mint: “Mint,” “spearmint,” “wintergreen,” “peppermint,” “minty menthol,” etc., including mint combined with another flavor like “tobacco” or “menthol” | Jewel mint, jewel mint diamond, jewel mint sapphire, mint, mint chip, minty fresh, peppermint twist, pure ice (mint/menthol/peppermint), refreshing mint, spearmint |
| Menthol: Must include specific mention of “menthol” in name or description | Blue menthol, icy menthol, menthol, menthol blast, menthol ice, menthol zero |
| Tobacco: Must include specific mention of “tobacco” in name or description | American tobacco, Cuban tobacco, jewel tobacco, tobacco, tobacco zero, Turkish tobacco, Virginia tobacco |
| Undetermined/Concept: Implicit or ambiguous | Blue blizzard, cheap thrill, gold, Hawaiian, ice cold, Jasmine ice, LeChic, pink wave, prism break, purple rain, regular, royal blue, savage patch, sea king, stardust, strapplemelon, summer solstice, sweet fusion, the firm, the sherbinator, tropical, TropiCali |

S3 Table: Device Type and Flavor Categorization of Posts

|  |  |  |
| --- | --- | --- |
| **Description: Device Type, Flavor** | **Policy Relevance**  | **Examples**  |
| 1. Cartridge-based ENDS, flavored (other than tobacco- or menthol-flavored) | Products explicitly prioritized by the policy | Mango-flavored cartridge, mint-flavored cartridge  |
| 2. Cartridge-based ENDS, tobacco-flavored, and/or menthol-flavored | Products explicitly not prioritized by the policy  | Menthol-flavored cartridge, tobacco-flavored cartridge |
| 3. Disposable devices, any flavor | Products not explicitly prioritized by the policy  | Vanilla-flavored disposable device |
| 4. Bottles of e-liquid, any flavor | Raspberry-flavored e-liquid |
| 5. Cartridge-based ENDS, undetermined/concept-named | Gold-named cartridge |
| 6. Combination of products from above categories 1, 2, 3, 4, and/or 5 | Combination of products from above categories 1, 2, 3, 4, and/or 5 | Berry-flavored cartridge and menthol-flavored cartridge in a single post |
| 7. Other device types, no flavor  | Not applicable  | Open/refillable devices with no e-liquid, cartridge-based ENDS devices sold without pods/cartridges, other device components, product accessories |
| 8. No devices, no flavor | Not applicable | “Happy New Year” |

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**Supplementary Figure 1.** The figure legends are required to have the same font as the main text, 12 point normal Times New Roman, single spaced. Please use a single paragraph for each legend and prepare the figures keeping in mind the PDF layout.