

# Marketing claims on websites of brick-and-mortar vape shops in the Greater Los Angeles area

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## ABSTRACT

**INTRODUCTION** Brick-and-mortar vape shops have increased in recent years, but there is limited research on the types of marketing claims consumers are exposed to on their websites – a dominant channel for marketing electronic nicotine delivery systems (ENDS). We investigated the websites of vape shop retailers in the Greater Los Angeles Area to describe their ENDS marketing claims.

**METHODS** Data collection occurred between 25 March and 20 June 2020. Of the 104 brick-and-mortar vape shops identified, 37 were found to have active websites. Rules were established to analyze website content. *ENDS Marketing Claims* were coded as the presence or absence of: 1) a direct claim of ENDS as a quitting aid; 2) a disclaimer that ENDS are not approved as smoking cessation devices (i.e. ENDS products are not FDA-approved for smoking cessation); 3) a direct claim of ENDS as healthier/safer than combustible cigarettes; and 4) direct claims regarding social benefits, including that ENDS are less expensive, can be used in more places, are cleaner or less messy/smelly, and are more socially accepted than combustible cigarettes.

**RESULTS** Smoking cessation-related benefits were claimed most frequently (43%), followed by health-related claims (30%), and disclaimers that ENDS are not approved as smoking cessation devices (24%). More than half (56.4%) of websites had an age restriction, requiring the user to click on a box to state that they were aged  $\geq 21$  years to view the site. None required proof or outside verification of age.

**CONCLUSIONS** Brick-and-mortar vape shops in the Greater Los Angeles Area are marketing ENDS on their websites as a healthier alternative to smoking cigarettes. Although half of the websites had an age gate popup that consumers see when they enter the website, action is needed to better enforce age restriction on access to vape shop websites. Utility for smoking cessation was claimed most frequently, followed by the claims of healthier alternatives to smoking cigarettes, and disclaimers that ENDS are not approved as smoking cessation devices. We discuss implications for tobacco regulatory policy.

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## INTRODUCTION

In the US, overall electronic nicotine delivery system (ENDS) sales have climbed steadily over the years and reached a record-high 22 million units in March 2021<sup>1</sup>. Although the evidence on ENDS' short- and long-term health effects is not definitive<sup>2,3</sup>, the products are most frequently used by current (past 30-day) smokers<sup>4,5</sup>. Compared to combustible cigarettes, users perceive ENDS as a healthier alternative and useful quitting aid<sup>6</sup>. Major ENDS manufacturers' websites are one of the dominant channels

to market claims of smoking cessation and health benefits<sup>7,8</sup>, but evidence of such claims on the websites of brick-and-mortar vape shops is scarce.

Increasing ENDS sales have been accompanied by the rise of brick-and-mortar vape shops<sup>8,9</sup>. Accounting for 30% of all ENDS sales<sup>10</sup>, more than 10000 vape shops have opened in the US during the past decade<sup>11,12</sup>. Unlike major ENDS manufactures, vape shops offer consumers a more interactive experience, including face-to-face marketing to promote the products<sup>13</sup>, and personal interaction with employees who often also use ENDS<sup>14</sup>, and provide their perceptions of the products. Thus, it is important to identify the types of ENDS marketing claims consumers are exposed to on the websites of brick-and-mortar vape shops.

To date, most studies on website ENDS marketing have focused on major retailers, manufacturers, and major commercial tobacco companies<sup>15,16</sup>. With the ENDS and vape market rapidly growing and evolving, monitoring and surveillance of the types of marketing claims disseminated by vape shop retailers can inform tobacco control policy and regulations. Given the knowledge gap, the present study sought to examine ENDS marketing claims on the websites of brick-and-mortar vape shops in the Los Angeles metropolitan area – the second-largest urban region area in the US<sup>17</sup>.

## METHODS

The data used in this study are publicly available via brick-and-mortar vape shop websites. A total of 104 brick-and-mortar vape shops were identified in the Greater Los Angeles Area using Yelp<sup>18</sup>. A total of 37 of the 104 brick-and-mortar vape shops were found to have active websites at the time of data collection (25 March – 20 June 2020).

Coding categories included: *Age Verification* (i.e. the presence or absence of a popup window to verify age for access to the website) and *Nicotine Warning Label* (i.e. the presence or absence of nicotine addictiveness warning statement on product packages or advertisements on the website). Similar to previous research<sup>19,20</sup>, *ENDS Marketing Claims* were coded as the presence or absence of: 1) a direct claim of ENDS as a quitting aid; 2) a disclaimer that ENDS are not approved as smoking cessation devices (given that ENDS products are not FDA-approved

for smoking cessation<sup>21</sup>, we sought to further inform tobacco regulatory policy); 3) a direct claim of ENDS as healthier/safer than combustible cigarettes; and 4) direct claims regarding social benefits, including that ENDS are cheaper, can be used in more places, are cleaner or less messy/smelly, and are more socially accepted than combustible cigarettes.

Four coders (MP, NM, SW, NT) independently double coded all categories and recorded qualitative texts for each ENDS marketing claim to ensure reliability. Discrepancies were resolved via weekly discussion. The estimated intercoder reliability coefficient (Cohen's kappa) was 0.93, with almost complete agreement between the coders. The University of Southern California Institutional Review Board approved the research protocol.

## Data analysis

Descriptive and summary statistics were conducted using SAS software, Version 9.3 (SAS Institute, Cary NC). We report the frequency of each coding category.

## RESULTS

### Website characteristics

More than half (59.5%; n=22) of the total (n=37) websites had an age restriction, requiring the user to click on a box to state that they were aged  $\geq 21$  years to view the site. None required proof or outside verification of age. Nearly seventy percent (67.6%; n=25) of sites had a nicotine warning label on product packages or advertisements. More than half (56.8%; n=21) of sites had external links to social media sites (i.e. Instagram, Facebook).

### Marketing claims

As shown in Table 1, smoking cessation-related benefits were claimed most frequently (43.2%; n=16), such as stating: 'vaping allows you to quit smoking – smoking is as much about a physical habit as it is about the dependence on nicotine'. Websites also frequently (29.7%; n=11) presented claims of ENDS as healthier/safer (e.g. 'This vape shop was built off the idea of harm reduction') than smoking cigarettes. Nine (24.3%) websites presented disclaimers that ENDS are not approved as smoking cessation devices, such as stating: 'electronic cigarettes and e-liquids are not smoking cessation products per FDA and are not intended to prevent or cure any disease or condition'.

**Table 1. Definitions and text examples of each ENDS marketing claim found on the websites of brick-and-mortar vape shops in the Greater Los Angeles Area, 25 March to 20 June 2020 (N=37)**

Claim	Definition	Text example
Quitting aid/cessation related	A direct claim(s) of ENDS as a quitting aid.	'Vaping allows you to quit smoking – smoking is as much about a physical habit as it is about the dependency on nicotine.'
Not a quitting aid/cessation related	A disclaimer(s) that ENDS are not approved by the U.S. Food and Drug Administration as smoking cessation devices.	'Electronic cigarettes and e-liquids are not smoking cessation products per FDA and are not intended to prevent or cure any disease or condition.'
Healthier/safer than cigarettes	A direct claim(s) of ENDS as healthier/safer than combustible cigarettes.	'This vape shop was built off the idea of harm reduction.' 'Vaping requires no combustion and is void of any tar or carcinogens. There are no known harmful side effects to vaping e-liquid.'
Cheaper than cigarettes	A direct claim(s) of ENDS as cheaper than combustible cigarettes or will save the user money.	'Beyond the daily savings, a smoker's health insurance costs will decrease after switching to electronic cigarettes, because 'vaping' is not smoking, which is the leading cause of preventable death.'
Ability to use in more places	A direct claim(s) that ENDS can be used in more places than cigarettes.	'Vaping can legally be done anywhere smoking cigarettes can be done, with the addition of some indoor establishments.'
Cleaner than cigarettes	A direct claim(s) that ENDS are cleaner or less messy/smelly than cigarettes.	'Vaping electronic cigarettes eliminates the foul odor of tobacco cigarettes from your life. You will not stink of cigarette smoke and your clothes, car, and furniture will not have that lingering odor ... All in all, electronic cigarettes are much cleaner.'
Socially accepted	A direct claim(s) that there is no social stigma associated with using ENDS compared to smoking cigarettes.	'Smoking affected our mood, our wallets, our family and our friends. We wanted a way out.'

Six websites (16.2%) claimed that ENDS are cheaper (e.g. '... more cost-effective in the long run than cigarettes') and cleaner to use than combustible cigarettes (e.g. '... all in all, electronic cigarettes are much cleaner'); 4 (10.8%) claimed that ENDS can increase social status (e.g. 'Smoking affected our mood, our wallets, our family and our friends. We wanted a way out'); and 1 claimed ability to use ENDS in more places compared to smoking cigarettes.

## DISCUSSION

The findings of the present study showed that brick-and-mortar vape shops in the Greater Los Angeles Area are marketing ENDS on their websites as healthier alternatives to smoking cigarettes. According to the results of this study, websites most frequently claim smoking cessation-related benefits, followed by claims of ENDS as healthier/safer than cigarettes, and disclaimers that ENDS are not approved as smoking cessation devices. These findings suggest that ENDS marketing claims on the websites of brick-and-mortar vape shops in the Greater Los Angeles Area may particularly appeal to cigarette smokers, and consumers are likely to encounter misleading health

claims in ENDS marketing, and mixed messages about whether ENDS are smoking cessation devices.

The findings of this study are in line with previous ENDS marketing analysis research<sup>19,22</sup> in terms of claims that ENDS are effective for smoking cessation, healthier/safer than cigarettes, and have more social benefits (i.e. cheaper and cleaner to use than cigarettes, increased social status). Additionally, similar to the historical marketing tactics of the tobacco industry's social acceptability advertisements targeting cigarette smokers<sup>23</sup>, the claims of ENDS as more socially beneficial than cigarettes, may particularly appeal to smokers.

More than half of websites had an age restriction requiring the user to click on a box to state that they were aged  $\geq 21$  years to view the site. However, none of the websites required proof or outside verification of age. These findings are consistent with previous research<sup>19</sup>, suggesting that youth have potential for access to ENDS and exposure to online ENDS marketing claims.

## Limitations

This study has some limitations. Our findings may

not be generalizable beyond the websites analyzed. Our analysis was limited to the websites of brick-and-mortar vape shops in the Greater Los Angeles Area. We excluded the websites of other brick-and-mortar vape shops, and retail websites that sell a specific ENDS brand. We also excluded Web-based channels that are used to market tobacco products, including social media. Further, data reflect ENDS marketing claims at specific moments in time.

## CONCLUSIONS

This study presents an analysis of the websites of vape shop retailers in the Greater Los Angeles Area to describe how they market ENDS. We found that utility for smoking cessation was claimed most frequently, followed by the claims of healthier alternatives to smoking cigarettes, and disclaimers that ENDS are not approved as smoking cessation devices. This new knowledge has the potential for encouraging tobacco control regulators to prohibit ENDS marketing claims that are misleading and unsupported by scientific evidence. Findings also suggest that action is needed to better enforce age restriction on access to vape shop websites.

## REFERENCES

- Centers for Disease Control and Prevention. Monitoring U.S. E-Cigarette Sales: National Trends. Data Brief. March 2021. Accessed May 29, 2022. <https://www.cdcfoundation.org/National-E-CigaretteSales-DataBrief-2021-Mar21?inline>
- Balfour DJK, Benowitz NL, Colby SM, et al. Balancing Consideration of the Risks and Benefits of E-Cigarettes. *Am J Public Health*. 2021;111(9):1661-1672. doi:10.2105/AJPH.2021.306416
- Glantz SA, Bareham DW. E-cigarettes: use, effects on smoking, risks, and policy implications. *Annu Rev Public Health*. 2018;39(1):215-235. doi:10.1146/annurev-publhealth-040617-013757
- Regan AK, Promoff G, Dube SR, Arrazola R. Electronic nicotine delivery systems: adult use and awareness of the 'e-cigarette' in the USA. *Tob Control*. 2011;22(1):19-23. doi:10.1136/tobaccocontrol-2011-050044
- King BA, Alam S, Promoff G, Arrazola R, Dube SR. Awareness and ever use of electronic cigarettes among U.S. adults, 2010–2011. *Nicotine Tob Res*. 2013;15(9):1623-1627. doi:10.1093/ntr/ntt013
- Etter JF, Bullen C. Electronic cigarette: users profile, utilization, satisfaction and perceived efficacy. *Addiction*. 2011;106(11):2017-2028. doi:10.1111/j.1360-0443.2011.03505.x
- Noel JK, Rees VW, Connolly GN. Electronic cigarettes: a new 'tobacco' industry? *Tob Control*. 2010;20(1):81. doi:10.1136/tc.2010.038562
- Ayers JW, Ribisl KM, Brownstein JS. Tracking the rise in popularity of electronic nicotine delivery systems (electronic cigarettes) using search query surveillance. *Am J Prev Med*. 2011;40(4):448-453. doi:10.1016/j.amepre.2010.12.007
- Dai H, Hao J. Exposure to Advertisements and Susceptibility to Electronic Cigarette Use Among Youth. *J Adolesc Health*. 2016;59(6):620-626. doi:10.1016/j.jadohealth.2016.06.013
- ECigIntelligence. Data in depth: U.S. e-cig brands, products, pricing analysis. August 28, 2014. Accessed May 11, 2021. <http://ecigintelligence.com/data-in-depth-u-s-e-cig-brands-products-pricing-analysis/>
- Herzog B, Gerberi J, Scott A. Tobacco Talk: Vapors/Tanks Driving Next Wave of E-Vapor Growth. Wells Fargo Securities LLC; March 14, 2014. Accessed May 29, 2022. <https://studylib.net/doc/13604809/equity-research-tobacco-talk--vapors-tanks-driving-next-w>
- Groskopf C. What Yelp data reveal about the sudden rise of vape shops in America. QUARTZ. February 10, 2016. Accessed May 11, 2021. <http://qz.com/608469/what-yelp-data-tells-us-about-vaping/>
- Cheney M, Gowin M, Wann TF. Marketing practices of vapor store owners. *Am J Public Health*. 2015;105(6):e16-e21. doi:10.2105/AJPH.2015.302610
- Lee YO, Kim AE. 'Vape shops' and 'E-Cigarette lounges' open across the USA to promote ENDS. *Tob Control*. 2015;24(4):410-412. doi:10.1136/tobaccocontrol-2013-051437
- Clark EM, Jones CA, Williams JR, Kurti AN, Norotsky MC, Danforth CM, Dodds PS. Vaporous marketing: uncovering pervasive electronic cigarette advertisements on Twitter. *PLoS One*. 2016;11(7):e0157304. doi:10.1371/journal.pone.0157304
- Chapman M. Wolves in sheep's clothing? Big Tobacco and its takeover of the e-cigarette market. Campaign Live. February 24, 2014. Accessed May 11, 2021. <https://www.campaignlive.co.uk/article/wolves-sheeps-clothing-big-tobacco-its-takeover-e-cigarette-market/1281851>
- U.S. Census Bureau. American Community Survey 5-year estimates: Los Angeles-Long Beach-Anaheim, CA Metro Area. Census Reporter. 2020. Accessed January 15, 2022. <https://censusreporter.org/profiles/31000US31080-los-angeles-long-beach-anaheim-ca-metro-area/>
- Sussman S, Garcia R, Cruz TB, et al. Consumers' perceptions of vape shops in Southern California: an analysis of online Yelp. *Tob Induc Dis*. 2014;12(November):22. doi:10.1186/s12971-014-0022-7
- Grana R, Ling P. "Smoking revolution"? A content analysis of electronic cigarette marketing websites. *Am J Prev Med*. 2014;46(4):395-340. doi:10.1016/j.amepre.2013.12.010
- Zhu S-H, Sun JY, Bonnevie E, Cummins SE, Gamst A, Yin L, Lee M. Four hundred and sixty brands of e-cigarettes and counting: implications for product regulation. *Tob Control*. 2014;23(Suppl 3):iii3-iii9.

doi:10.1136/tobaccocontrol-2014-051670

21. E-Cigarettes, Vapes, and other Electronic Nicotine Delivery Systems (ENDS). U.S. Food and Drug Administration. Updated March 8, 2022. Accessed May 30, 2022. <https://www.fda.gov/tobacco-products/products-ingredients-components/e-cigarettes-vapes-and-other-electronic-nicotine-delivery-systems-ends>
22. Yao T, Jiang N, Grana R, Ling PM, Glantz SA. A content analysis of electronic cigarette manufacturer websites in China. *Tob Control*. 2016;25(2):188-194. doi:10.1136/tobaccocontrol-2014-051840
23. Ling P, Glantz SA. Tobacco industry consumer research on socially acceptable cigarettes. *Tob Control*. 2005;14(5):e3. doi:10.1136/tc.2005.011239

#### CONFLICTS OF INTEREST

The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none was reported.

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#### ETHICAL APPROVAL AND INFORMED CONSENT

Ethical approval was obtained from the University of Southern California Institutional Review Board (HS#19-00827; Date: 11 November 2019). Informed consent was not required as publicly available data were used.

#### DATA AVAILABILITY

The data supporting this research are available from the authors on reasonable request.

#### PROVENANCE AND PEER REVIEW

Not commissioned; externally peer reviewed.