Philip Morris International used the e-cigarette, or vaping, product use associated lung injury (EVALI) outbreak to market IQOS heated tobacco

John W Ayers , ^{1,2} Eric C Leas , ^{2,3} Mark Dredze, ⁴ Theodore L Caputi , ⁵ Shu-Hong Zhu, ³ Joanna E Cohen , ⁶

► Additional supplemental material is published online only. To view, please visit the journal online (http://dx.doi. org/10.1136/tobaccocontrol-2021-056661).

¹Department of Medicine, University of California San Diego, La Jolla, California, USA ²Center for Data Driven Health at the Qualcomm Institute, University of California San Diego, La Jolla, California, USA ³Herbert Wertheim School of Public Health and Human Longevity Science, University of California San Diego, La Jolla, California, USA ⁴Department of Computer Science, Johns Hopkins University, Baltimore, Maryland, USA

⁵Department of Economics, Massachusetts Institute of Technology, Boston, Massachusetts, USA ⁶Institute for Global Tobacco Control, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA

Correspondence to

Dr John W Ayers, Department of Medicine, University of California San Diego, La Jolla, CA 92093, USA; ayers.john.w@gmail.com

Received 16 March 2021 Accepted 24 March 2021



© Author(s) (or their employer(s)) 2021. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Ayers JW, Leas EC, Dredze M, et al. Tob Control Epub ahead of print: [please include Day Month Year]. doi:10.1136/ tobaccocontrol-2021-056661 25 July 2021 will mark the second anniversary¹ of the e-cigarette, or vaping, product use associated lung injury (EVALI) outbreak.² The concerns raised and news media attention focused on EVALI created a fertile environment for the tobacco industry to promote their e-cigarette alternatives,¹³ but this has not been studied.

One such product is Philip Morris International's (PMI) heated tobacco product: 'IQOS'.^{4 5} To assess how PMI promoted IQOS in the news during EVALI, we used 'Tobacco Watcher' (www.tobaccowatcher.org), a fully automated and publicly available tobacco media analysis engine that warehouses news from more than 500 000+ sources. We plotted trends in news stories mentioning 'IQOS' finding the largest number of stories mentioning IQOS occurred on 25 September 2019, with 261 articles, more than double the next highest day previously recorded.

While investigating this anomaly we discovered an official PMI press release entitled 'Lung illnesses associated with use of vaping products in the US' was published the same day.⁶ In the release (see online supplemental material), PMI recounted the EVALI outbreak beginning: 'Skepticism and fear around vaping has emerged following the cases of respiratory illness and deaths in the US associated with the use of e-cigarettes.' PMI then contrasted this against their IQOS heated tobacco product, writing 'on April 30 2019, the FDA authorized IQOS for sale in the US, finding that marketing of the product would be 'appropriate for the protection of public health' (quotes used in the original release).

According to Tobacco Watcher, the original PMI press release was republished (including editing or revisions to make the republication consistent with the publisher's format) in 14 additional news outlets. Further, evidence suggests PMI's promotion of IQOS was widely adopted by newsmakers. In the 60-day period following PMI's release, the number of articles archived on Tobacco Watcher mentioning both the outbreak (eg, included the terms 'vaping' and 'illness') and 'IQOS' averaged 11.3 articles per day compared with 1.1 average for the 30 days prior to PMI's press release. This additional news coverage included several widely circulated outlets, such as the Associated Press, with these articles echoing if uncertainty about the safety of e-cigarettes will drive vapers to switch to IQOS.

PMI capitalised on EVALI by using an earned news media strategy to market their IQOS brand of heated tobacco for free across scores of news outlets that reached millions of readers. This marks the first known case where a tobacco company used the EVALI outbreak to promote tobacco products. It raises questions about the propriety of PMI's claims, how regulators should address earned media campaigns, concerns about how earned media can serve covert tobacco industry promotion and the need for tobacco control to invest in surveillance to detect earned media marketing campaigns.

Did PMI's press release violate Food and Drug Administration's (FDA) regulations? Although interpretations among experts will vary, some readers could infer PMI's campaign was designed to market IOOS as a safer alternative to vaping. For instance, PMI's claim that the FDA endorsed IQOS as 'appropriate for the protection of public health' can be both technically correct to experts and potentially misleading to the lay public. PMI could not make explicit or implicit reduced-risk or reduced-exposure claims about IQOS in the USA without first applying for and receiving a favourable modified risk tobacco product (MRTP) marketing order from the FDA. PMI was aware of this as they had an application for an MRTP order at the time of the press release, but it was not until July 2020 that they received MRTP reducedexposure authorisation.⁷ However, even with this order there may be violations as tobacco companies are also prohibited by the US Tobacco Control Act from stating that the FDA has in any way approved or endorsed IQOS-for example, because of FDA's Premarket Tobacco Product Application order for IQOS. See 21 USC 331(tt). PMI's behaviour herein is consistent with other potential violations of the US Tobacco Control Act, including developing web pages on IQOS's potential use as a harm reduction product which they advertised on Google.8

Current regulations are interpreted to be exclusively focused on claims made by tobacco companies, but should tobacco companies be held responsible for claims made in news reports that were potentially misinformed via an earned media campaign? Such precedent exists. For example, Purdue Pharmaceuticals was held liable for fostering an information landscape where the addictiveness and dangers of opioids were downplayed including in news media. In the case of PMI and IQOS, one news article published in the days following the release

Industry watch

said 'Philip Morris claims these [IQOS] products are safer than cigarettes'. ¹⁰ Another said 'IQOS seems to be a safer alternative than vapes'. ¹¹ Should PMI face penalties for such claims arising from an earned media campaign they initiated? Should PMI be as diligent to snuff out potential misimpressions as they were to promote them? What does an appropriate correction look like? While the release published on the PMI website has been edited subsequent to its initial discovery by Tobacco Watcher, claims that may imply IQOS is safer have not been revised (as of 10 March 2021). ¹²

These issues are further complicated because earned media campaigns have the potential to hide tobacco industry promotion. News reports do not disclose all the parties who contributed expertise. A recent investigation by University of Bath's Tobacco Tactics discovered that the Franklin News Foundation was partially funded by the tobacco industry, thereby potentially influencing reporting on over 40 news sites controlled by the agency.¹³ In our case, the PMI release was rarely referenced in news reports, despite news coverage of EVALI and IOOS increasing 10-fold after its publication. Had PMI never publicly posted their press release to the company website it would have been impossible to know how news reports were informed by PMI. Could these concerns be addressed by requiring tobacco companies to disclose when their members engage in earned media campaigns? Should tobacco companies be allowed to use earned media to market their products all together? These critical questions have been overlooked to date, but become apparent in the context of how PMI promoted IQOS during the EVALI outbreak.

The potential for the tobacco industry to surreptitiously promote their products via earned media is exacerbated because monitoring news media has been neglected. For example, during the past 5 years only five articles archived on PubMed and published in Tobacco Control content analysed news to survey the tobacco landscape. Consequently, a greater emphasis on news media monitoring 14 must become a priority. The value-add of such monitoring is demonstrated by our use of Tobacco Watcher, suggesting much more can be learnt by tobacco control regulators and scientists from mining this public resource.

Twitter Theodore L Caputi @TheodoreCaputi

Acknowledgements We appreciate feedback from Benjamin M Althouse, PhD, ScM (Gates Foundation), Alicia Nobles, PhD (UC San Diego) and Christopher Longhurst, MD (UC San Diego).

Contributors All authors contributed to the drafting and revising of the work.

Funding This work was supported by funding from the Burroughs Wellcome Fund, Tobacco-Related Disease Research Program and Bloomberg Philanthropies.

Disclaimer The funders played no role in the design and conduct of the study, collection, management, analysis and interpretation of the data; preparation, review or approval of the manuscript; and decision to submit the manuscript for publication.

Competing interests JWA owns equity positions in Health Watcher and Good Analytics. ECL has received consulting fees from Health Watcher and Good Analytics. MD holds equity in Good Analytics and has received consulting fees from Bloomberg LP. TLC received fees from Good Analytics and holds equity in Data Science Solutions. JWA, JEC and MD are the creators of tobaccowatcher.org, a project of the Institute for Global Tobacco Control at the Johns Hopkins Bloomberg School of Public Health for the Bloomberg Philanthropies.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; internally peer reviewed.

ORCID iDs

John W Ayers http://orcid.org/0000-0002-8831-8691 Eric C Leas http://orcid.org/0000-0001-9221-0336 Theodore L Caputi http://orcid.org/0000-0003-3498-9032 Joanna E Cohen http://orcid.org/0000-0002-3869-3637

REFERENCES

- 1 Leas EC, Nobles AL, Caputi TL, et al. News coverage of the e-cigarette, or Vaping, product use associated lung injury (EVALI) outbreak and Internet searches for vaping cessation. Tob Control 2020;123:tobaccocontrol-2020-055755.
- 2 Centers for Disease Control and Prevention. CDC's office on smoking and health. Outbreak of lung injury associated with the use of E-Cigarette, or vaping, products. Available: https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html [Accessed 10 Mar 2021].
- 3 Leas EC, Moy NH, Nobles AL, et al. Google Shopping queries for vaping products, JUUL and IQOS during the e-cigarette, or Vaping, product use associated lung injury (EVALI) outbreak. Tob Control 2021. doi:10.1136/tobaccocontrol-2021-056481. [Epub ahead of print: 19 Feb 2021].
- 4 Caputi TL. Industry watch: heat-not-burn tobacco products are about to reach their boiling point. *Tob Control* 2016;26:609–10.
- 5 Caputi TL, Leas E, Dredze M, et al. They're heating up: Internet search query trends reveal significant public interest in heat-not-burn tobacco products. PLoS One 2017;12:e0185735.
- 6 Tobacco Watcher. Tobacco Watcher. Available: https://tobaccowatcher. globaltobaccocontrol.org/articles/1c5887ce-d3b0-3643-ad32-9f8c2885624d/ [Accessed 10 Mar 2021].
- 7 Lempert LK, Glantz S. Analysis of FDA's IQOS marketing authorisation and its policy impacts. *Tob Control* 2020:tobaccocontrol-2019-055585.
- 8 Leas EC, Cohen JE, Ayers JW. A Philip Morris advertisement for its heated tobacco product IQOS sets a troubling precedent. *Tob Control* 2020;29:e1:e16870.
- 9 Young I. Heated tobacco may replace vaping amidst consumer issues. Available: https://www.etftrends.com/heated-tobacco-may-replace-vaping-amidst-consumer-issues/ [Accessed 10 Mar 2021].
- 10 Pandika M. What is Iqos, and how is it different from a vape? Available: https://www.mic.com/p/what-is-iqos-how-is-it-different-from-a-vape-19196319 [Accessed 10 Mar 2021]
- 11 Dyer O. Purdue Pharma to plead guilty and pay \$8.3bn over opioid marketing. BMJ 2020;371:m4103.
- 12 Philip Morris International. Lung illnesses associated with use of vaping products in the US. Available: https://www.pmi.com/media-center/news/lung-illnesses-associated-with-use-of-vaping-products-in-the-us-the-facts [Accessed 10 Mar 2021].
- 13 Tobacco tactics. Tobacco tactics. Available: https://tobaccotactics.org/wiki/franklin-news-foundation/ [Accessed 10 Mar 2021].
- 14 Ayers JW, Dredze M, Leas EC, et al. Next generation media monitoring: global coverage of electronic nicotine delivery systems (electronic cigarettes) on Bing, Google and Twitter, 2013-2018. PLoS One 2018;13:e0205822.