

Levy David (Orcid ID: 0000-0001-5280-3612)  
McNeill Ann (Orcid ID: 0000-0002-6223-4000)  
Brown Jamie (Orcid ID: 0000-0002-2797-5428)

**Response to Brailon: No, not the exception**

David T. Levy, PhD, Washington DC, USA, [dl777@georgetown.edu](mailto:dl777@georgetown.edu)  
Ann McNeill, PhD, London, England, [ann.mcneill@kcl.ac.uk](mailto:ann.mcneill@kcl.ac.uk)  
Martin J Jarvis, DSc, London, England, [martin.jarvis@ucl.ac.uk](mailto:martin.jarvis@ucl.ac.uk)  
Jamie Brown, PhD, London, England, [jamie.brown@ucl.ac.uk](mailto:jamie.brown@ucl.ac.uk)  
Yameng Li, MS, Washington DC, USA, [yl954@georgetown.edu](mailto:yl954@georgetown.edu)

**Corresponding author:** David T. Levy, PhD, Washington DC, USA,  
[dl777@georgetown.edu](mailto:dl777@georgetown.edu)

**Declaration of interests:** none

**Keywords:** England, tobacco control policy , e-cigarettes, vaping

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/add.15618

We thank Dr. Braillon for his comments [1]. However, Dr. Braillon seems to have missed the point of our analysis by arguing that the recent declines in smoking in England are merely due to cigarette-oriented policies. Our analysis explicitly takes into account the role of cigarette-oriented control policies [2]. We first validated the model over a pre-vaping period, 2000-2012, a particularly active period for tobacco control policies. The model showed similar reductions in prevalence across age groups and sex as found in surveys. In estimating the implicit impact of e-cigarettes, we specifically net out the impact of new and previously implemented cigarette-oriented policies over the post-vaping period, 2012-2019. Thereby, we explicitly control for the impact of cigarette-oriented policies. We also note that the impact of cigarette-oriented policies may have been greater than we estimated in the post-vaping period, precisely because of the impact of e-cigarettes. E-cigarettes are commonly found to be a substitute for cigarettes [3-6], and thus may have increased the impact of cigarette-oriented policies by providing smokers an alternative.

Besides the evidence presented in our paper, Dr. Braillon ignores other studies using different methods that have found beneficial effects of e-cigarettes in England [7-12]. In addition, Levy et al. [13] conducted a similar analysis for the US and found slightly smaller e-cigarette impacts, but with the effects more concentrated on young adult smoking. Those findings are consistent with the unusually large recent reductions in US smoking at younger ages [14, 15].

Dr. Braillon also compares our results for England to his perception of trends in France. Although it was unclear to us the source of his data, he argues that smoking prevalence in France has plateaued. In fact, recent data indicates that, although remaining at about 30% from 2000 to 2016, smoking prevalence in France fell by 6 percentage points to 24% by 2019 as e-cigarettes became more widely used [16]. Much larger reductions were observed at young ages [16], the most likely users of e-cigarettes. Nevertheless, we agree with the need to consider the contribution of vaping to smoking rates in different countries. The array of nicotine products has changed dramatically in the last 10 years. It is important to compare trends in smoking to vaping rates in different countries [17] to gain a better understanding of their interrelationship and the impact of policies towards those products. Indeed, one of the more interesting comparisons is that, while England [2] and the US [13] has seen the rate of decline in smoking prevalence increase since e-cigarette use has become more widespread, Australia, a country which has had some of the strongest cigarette-oriented policies but very restrictive policies toward e-cigarettes, has seen a levelling off of smoking prevalence [18].

While our paper and other recent studies point towards beneficial effects of e-cigarettes, it will be important to continually monitor the relationship between cigarette and e-cigarette use. As we continue to examine the data, most important is need for rigorous analysis and the need to keep an open mind [19].

## References

1. Braillon A. Reduction in smoking prevalence and e-cigarettes: an English exception? *Addiction* 2021 <https://doi.org/10.1111/add.15600>
2. Levy DT, Sanchez-Romero LM, Li Y, Yuan Z, Travis N, Jarvis MJ, et al. England SimSmoke: the impact of nicotine vaping on smoking prevalence and smoking-attributable deaths in England. *Addiction*. 2021;116(5):1196-211.
3. Heckman BW, Fong GT, Borland R, Hitchman S, O'Connor RJ, Bickel WK, et al. The impact of vaping and regulatory environment on cigarette demand: behavioral economic perspective across four countries. *Addiction*. 2019;114 Suppl 1:123-33.
4. Huang J, Gwarnicki C, Xu X, Caraballo RS, Wada R, Chaloupka FJ. A comprehensive examination of own- and cross-price elasticities of tobacco and nicotine replacement products in the U.S. *Prev Med*. 2018;117:107-14.
5. Huang J, Tauras J, Chaloupka FJ. The impact of price and tobacco control policies on the demand for electronic nicotine delivery systems. *Tob Control*. 2014;23 Suppl 3:iii41-7.
6. Zheng Y, Zhen C, Dench D, Nonnemaker JM. U.S. Demand for Tobacco Products in a System Framework. *Health Econ*. 2016.
7. Beard E, Jackson SE, West R, Kuipers MAG, Brown J. Trends in attempts to quit smoking in England since 2007: A time series analysis of a range of population-level influences. *Nicotine Tob Res*. 2019.
8. Beard E, Jackson SE, West R, Kuipers MAG, Brown J. Population-level predictors of changes in success rates of smoking quit attempts in England: a time series analysis. *Addiction*. 2020;115(2):315-25.
9. Beard E, West R, Michie S, Brown J. Association of prevalence of electronic cigarette use with smoking cessation and cigarette consumption in England: a time-series analysis between 2006 and 2017. *Addiction*. 2020;115(5):961-74.
10. Brose LS, Hitchman SC, Brown J, West R, McNeill A. Is the use of electronic cigarettes while smoking associated with smoking cessation attempts, cessation and reduced cigarette consumption? A survey with a 1-year follow-up. *Addiction*. 2015;110(7):1160-8.
11. Brown J, Beard E, Kotz D, Michie S, West R. Real-world effectiveness of e-cigarettes when used to aid smoking cessation: a cross-sectional population study. *Addiction*. 2014;109(9):1531-40.
12. Jackson SE, Kotz D, West R, Brown J. Moderators of real-world effectiveness of smoking cessation aids: a population study. *Addiction*. 2019;114(9):1627-38.
13. Levy DT, Sanchez-Romero LM, Travis N, Yuan Z, Li Y, Skolnick S, et al. US Nicotine Vaping Product SimSmoke Simulation Model: The Effect of Vaping and Tobacco Control Policies on Smoking Prevalence and Smoking-Attributable Deaths. *Int J Environ Res Public Health*. 2021;18(9).
14. Levy DT, Warner KE, Cummings KM, Hammond D, Kuo C, Fong GT, et al. Examining the relationship of vaping to smoking initiation among US youth and young adults: a reality check. *Tob Control*. 2019;28(6):629-35.
15. Meza R, Jimenez-Mendoza E, Levy DT. Trends in Tobacco Use Among Adolescents by Grade, Sex, and Race, 1991-2019. *JAMA Netw Open*. 2020;3(12):e2027465.

16. Pasquereau A, Andler R, Arwidson P, Guignard R, Nguyen-Thanh V. Consommation de tabac parmi les adultes: bilan de cinq années de programme national contre le tabagisme, 2014-2019. . Bulletin Epidemiologique Hebdomadaire. 2020;14:273-81.
17. Data Europa EU. Special Eurobarometer 458: Attitudes of Europeans towards tobacco and electronic cigarettes 2021 [Available from: [https://data.europa.eu/data/datasets/s2146\\_87\\_1\\_458\\_eng?locale=en](https://data.europa.eu/data/datasets/s2146_87_1_458_eng?locale=en)].
18. Mendelsohn C, Hall W, Borland R. Could vaping help lower smoking rates in Australia? Drug Alcohol Rev. 2020;39(4):415-8.
19. Shahab L, Britton J, Brown J, Hajek P, McNeill A, signatories. The need for an evidence-based and rational debate on e-cigarettes. Lancet. 2020;395(10225):688.

Accepted Article