

# Home Smoking and Vaping Policies Among US Adults: Results from the Population Assessment of Tobacco and Health (PATH) Study, Wave 3

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## Introduction

- ❖ Prevalence of secondhand exposure to e-cigarette aerosol has increased in the U.S. along with increases in vaping rates.
- ❖ Toxicants in e-cigarette aerosol include nicotine, carbonyls, ultrafine particulates, heavy metals and volatile organic compounds, which are associated with cardiovascular disease and carcinogenesis.
- ❖ The public perceptions of harms associated with secondhand exposure to e-cigarette aerosol are low.
- ❖ Few studies have examined home policies that prohibit vaping, or have compared differences in vaping policies for smokers, vapers, and dual users.

## Methods

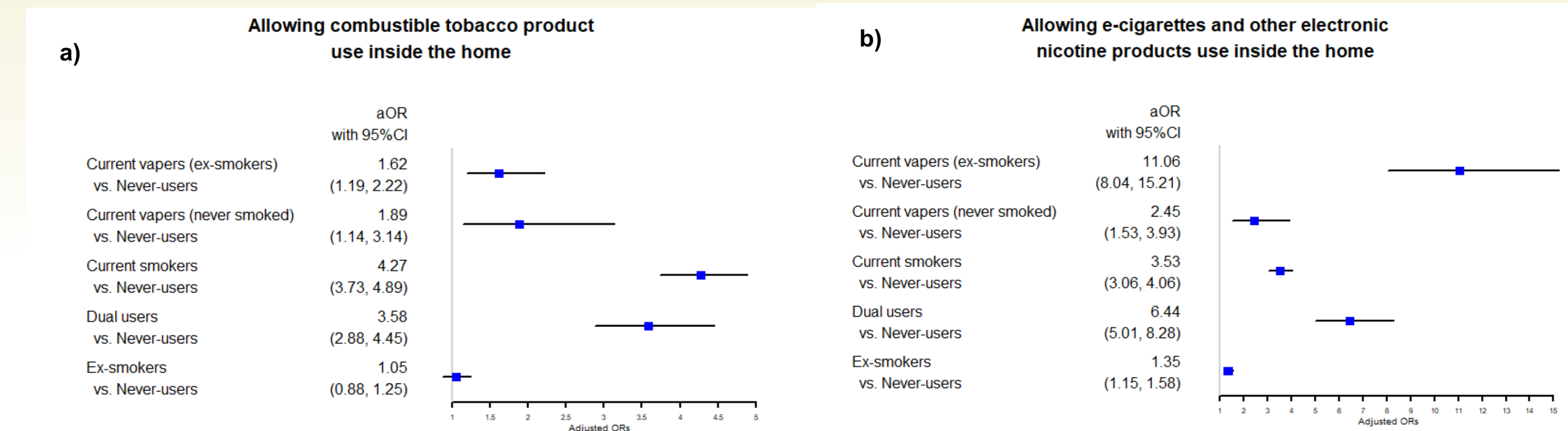
- ❖ The study was conducted using the nationally representative, cross-sectional PATH Wave 3 data collected from October 19, 2015 to October 23, 2016 on 28,148 adults (18 years and older).
- ❖ Predictor variable is current smoking and vaping status, which has six levels: dual users, current smokers, current vapers who were ex-smokers, current vapers who never smoked, ex-smokers, and never-users.
- ❖ Outcome variables are smoke-free and vape-free home policies and each outcome variable has two levels: not allowed and allowed at home.
- ❖ Covariates include age, sex, marital status, race/ethnicity, education level, income level, insurance status, currently lived with a smoker, and currently lived with a vaper, frequency of smoking in life time, and frequency of vaping in life time.
- ❖ Weighted multivariable logistic regression models were used for data analyses. Linear contrasts were conducted to examine the moderation effects of age, sex, marital status, living with a smoker and living with a vaper on the association of current smoking and vaping status with smoke-free and vape-free home policies.

## Results

**Table 1:** Weighted prevalence of smoke-free and vape-free home policies across current vaping and smoking status estimated from PATH wave 3 adults.

Variables	Dual users (n=606)	Current smokers (n=6104)	Current vapers (ex-smokers) (n=412)	Current vapers (never smoked) (n=104)	Ex-smokers (n=6335)	Never users (n=8728)
<b>Home rule on combustible tobacco product use*</b>						
It is not allowed anywhere or at any time inside my home	62.16 (60.33, 64.03)	55.53 (54.98, 56.09)	83.59 (82.55, 84.64)	83.56 (81.18, 85.97)	91.41 (91.20, 91.63)	91.64 (91.20, 92.08)
<b>Home rule on e-cigarettes and other electronic nicotine products use*</b>						
It is not allowed anywhere or at any time inside my home	25.33 (22.72, 28.25)	54.23 (53.70, 54.78)	21.23 (18.19, 24.77)	55.68 (50.15, 61.79)	86.42 (86.24, 86.60)	89.57 (89.18, 89.96)

Note: \* means  $P < 0.0001$  for comparing the weighted prevalence of smoke-free and vape-free home policies across different vaping and smoking status.



**Figure 1:** Adjusted odds ratio of a) allowing combustible tobacco product use and b) vaping inside the home.

## Discussion

- ❖ All vaping groups (including dual users) were more likely to allow vaping than smoking inside the home.
- ❖ Dual users were more likely to have a rule prohibiting smoking inside the home than they were to have a rule not allowing vaping inside the home.
- ❖ Current smokers were more likely to allow smoking inside home than current vapers who were ex-smokers or had never smoked.
- ❖ Current vapers, current smokers, and dual users were more likely to allow smoking inside the home than never-users.
- ❖ Current vapers, current smokers, dual users, and ex-smokers were more likely to allow vaping inside the home than never-users.
- ❖ Dual users who were young, female, married, not living with a smoker or vaper were more likely to allow both smoking and vaping inside home compared to never-users.

## Conclusion

- ❖ The discrepancies between home smoking and vaping policies among vapers, between vapers and smokers, and among dual users suggest that vapers may be switching to/using ecigs with the intent of harm reduction. Though, these results show people who prohibit smoking in their homes are more tolerant in allowing e-cigarette use in their homes, thus increasing the risk others are exposed to potentially harmful e-cigarette aerosol.
- ❖ The current study provides a separate rationale for caution in the promotion of e-cigarettes for harm reduction relative to the risk exposures to others in the home.

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