

Short-term ENDS use is not associated with self-reported COPD after adjusting for cigarette smoking history: A longitudinal analysis of PATH data



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Background

- Understanding the relationship between electronic nicotine delivery systems (ENDS) and chronic obstructive pulmonary disease (COPD) and other respiratory conditions is critical
- However, previous studies have not fully controlled for history of cigarette smoking

Methods

Population: Adults 40+ from Population Assessment of Tobacco & Health Study wave 1 with no previous COPD diagnosis, followed waves 1-5 (2013-2019)

Outcome: Self-reported incident chronic obstructive Pulmonary Disease (COPD)

Exposure: Current ENDS use was measured as a time-varying covariate, lagged by one wave, defined as established every day or some days use

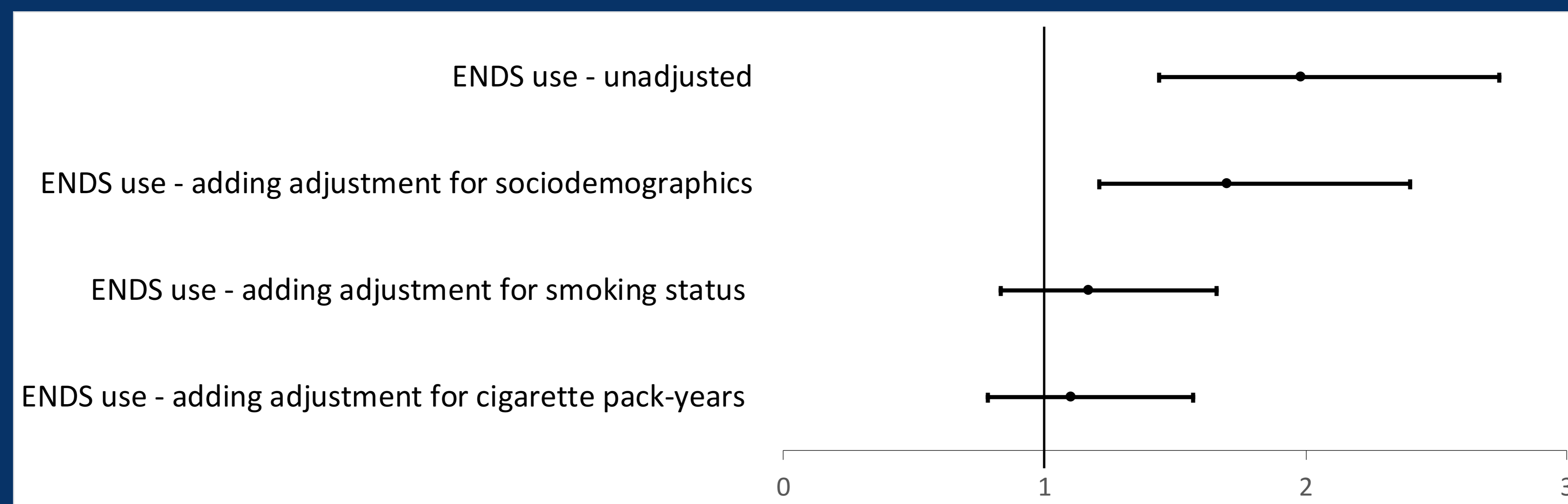
Covariates: Demographics (age, sex, race/ethnicity, education), health characteristics (asthma, obesity, exposure to second-hand smoke), and smoking history (smoking status, baseline cigarette-pack years)

Analysis: Discrete time survival models

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Results

Hazard Ratios Predicting Incident COPD



Results

- Incident COPD was self-reported by 925 respondents
- Prior to adjusting for other covariates, ENDS use appeared to nearly double the risk of incident COPD
- However, ENDS use was no longer significantly associated with COPD after adjusting for cigarette smoking status and cigarette pack-years
- More than 90% of ENDS users either currently or formerly smoked cigarettes
- The risk of COPD incidence increased with cigarette pack-years and was higher for respondents who were currently smoking, older, female, less educated, and had baseline asthma or obesity**

Conclusions

- ENDS use did not significantly increase the risk of self-reported incident COPD over a five-year period once current smoking status and cigarette pack-years were included**
- Adequate control for cigarette smoking history is needed to assess any independent health effects of ENDS use on COPD

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Smoking status, cigarette pack-years (baseline) and SHS exposure by ENDS status Path wave 1 adults 40+ in analytic sample

