

SIGNIFICANCE

ENDS use among adolescents has increased substantially over the past decade, but little is known about its impact on chronic respiratory health conditions such as asthma.

KEY FINDINGS

Adolescents who exclusively smoked cigarettes, but not those who used ENDS, had higher risk of incident diagnosed asthma over a five-year follow-up period.

METHODS

Population: Youth ages 12-17 in 2013-2014 from Population Assessment of Tobacco and Health Study, Waves 1-5 (2013-2019)

Exposure: Time-varying, lagged (t-1) tobacco use in the past 30 days:

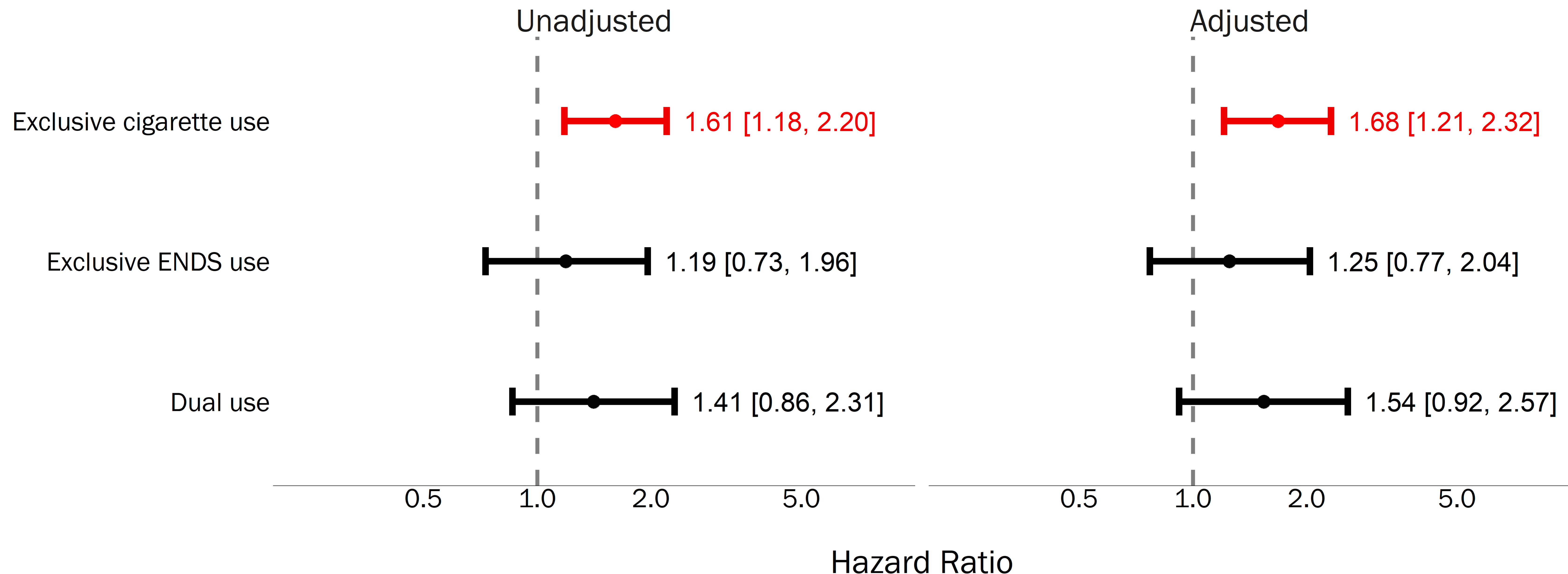
- (1) never or non-current use
- (2) exclusive cigarette use
- (3) exclusive ENDS use
- (4) dual use

Outcome: Parent or self-reported incident diagnosed asthma

Covariates: Baseline sociodemographic (age, sex, race/ethnicity, parental educational attainment) and other risk factors (urbanicity, secondhand smoke exposure, household combustible tobacco use, and BMI-for-age).

Analysis: Discrete time survival models

RESULTS



*Compared to never or non-current use
 HR [95% CI]
 Person N = 9,140; Risk Period N = 39,554

DISCLOSURE INFORMATION

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CONCLUSIONS

Exclusive cigarette use increased the risk of incident diagnosed asthma (adjusted Hazard Ratio (aHR): 1.68, 95% CI: (1.21, 2.32)) compared to never or non-current ENDS and cigarette use over a five-year follow-up period.

Compared to never or non-current use, the risk of incident diagnosed asthma was not significantly different for exclusive ENDS use (aHR: 1.25, 95% CI: (0.77, 2.04)) and dual use (aHR: 1.54, 95% CI: (0.92, 2.57)) over the same period of follow-up.

Additional studies are needed to better assess the long-term association between ENDS use and incident diagnosed asthma as more prospective longitudinal data becomes available.