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## LONGITUDINAL ASSOCIATIONS BETWEEN CIGAR USE, WITH AND WITHOUT CIGARETTES, AND SELF-REPORTED DIAGNOSED **INCIDENT COPD AMONG US ADULTS 40+**

### BACKGROUND

- While regular cigar smoking is believed to carry similar health risks as regular cigarette smoking, the respiratory health effects of cigars are not well characterized.
- As the per capita consumption of cigars continues to increase in the US, it is important to understand the relationship between cigar use, both exclusively and in combination with cigarette use, and chronic obstructive pulmonary disease (COPD).

### METHODS

**Data:** Adults aged 40+ from Population Assessment of Tobacco and Health (PATH) Study, Waves 1-5 (2013-2019)

**Outcome:** Self-Reported Incident Diagnosed COPD.

### **Cigar/Cigarette Exposure:**

Categorical time-varying covariate lagged by one wave with the following groupings:

- 1) Never or non-current use of cigars/cigarettes
- 2) exclusive cigarette use
- 3) exclusive cigar use
- 4) dual cigar/cigarette use

**Covariates:** Baseline demographics (age, sex, race or ethnicity, education), clinical risk factors (asthma, obesity, diabetes, second-hand smoke exposure), smoking history (former smoking status, time since quit, cigarette pack-years).

**Analysis:** Discrete-time survival models.

### Steven Cook, James H. Buszkiewicz, David T. Levy, Rafael Meza & Nancy L. Fleischer

### Model

- Never or non-current use
- Exclusive cigarette use
- Exclusive cigar use
- Dual cigarette and cigar use

- Never or non-current use
- Exclusive cigarette use
- Exclusive cigar use
- Dual cigarette and cigar use
- Log cigarette pack-years

# Exclusive cigarette use and dual cigar/cigarette use were associated with increased incident COPD risk compared to non-use while exclusive cigar use was not.

### Unadjusted

### Adjusted



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Hazard Ratio (95% CI)

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### RESULTS

- Of the 9,907 respondents in the analytic sample, 930 self-reported an incident diagnosis of COPD at follow-up.
- In adjusted models, exclusive cigarette use (aHR 1.41, 95% CI: 1.08-1.85) and dual cigar/cigarette use (aHR 1.78, 95% CI: 1.18-2.65) were associated with increased incident COPD risk compared to non-use while exclusive cigar use (aHR 1.25, 95% CI: 0.65, 2.43) was not.
- The risk of diagnosed incident COPD increased with the log of cigarette-pack-years and was higher for older respondents, females, respondents with lower education, and respondents with baseline asthma, obesity, or higher second-hand smoke exposure.

### CONCLUSIONS

- Exclusive cigarette use and dual cigar/cigarette use were associated with diagnosed incident COPD after controlling for confounders, including cigarette pack-years.
- These results suggest that cigars, when used in combination with cigarettes, may be associated with poor respiratory health.
- It is possible that dual use may promote a higher likelihood of inhaling cigar smoke, and future research would benefit from examining whether inhalation of cigar smoke increases COPD risk.