

# ENDS FLAVOR USE BY AGE GROUP IN THE U.S.: A LONGITUDINAL ANALYSIS

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## Background

This study investigated how the use of non-tobacco flavored ENDS use varies for youth (12–17 years old), young adults (18–24 years old), and older adults (25+ years old) over time.

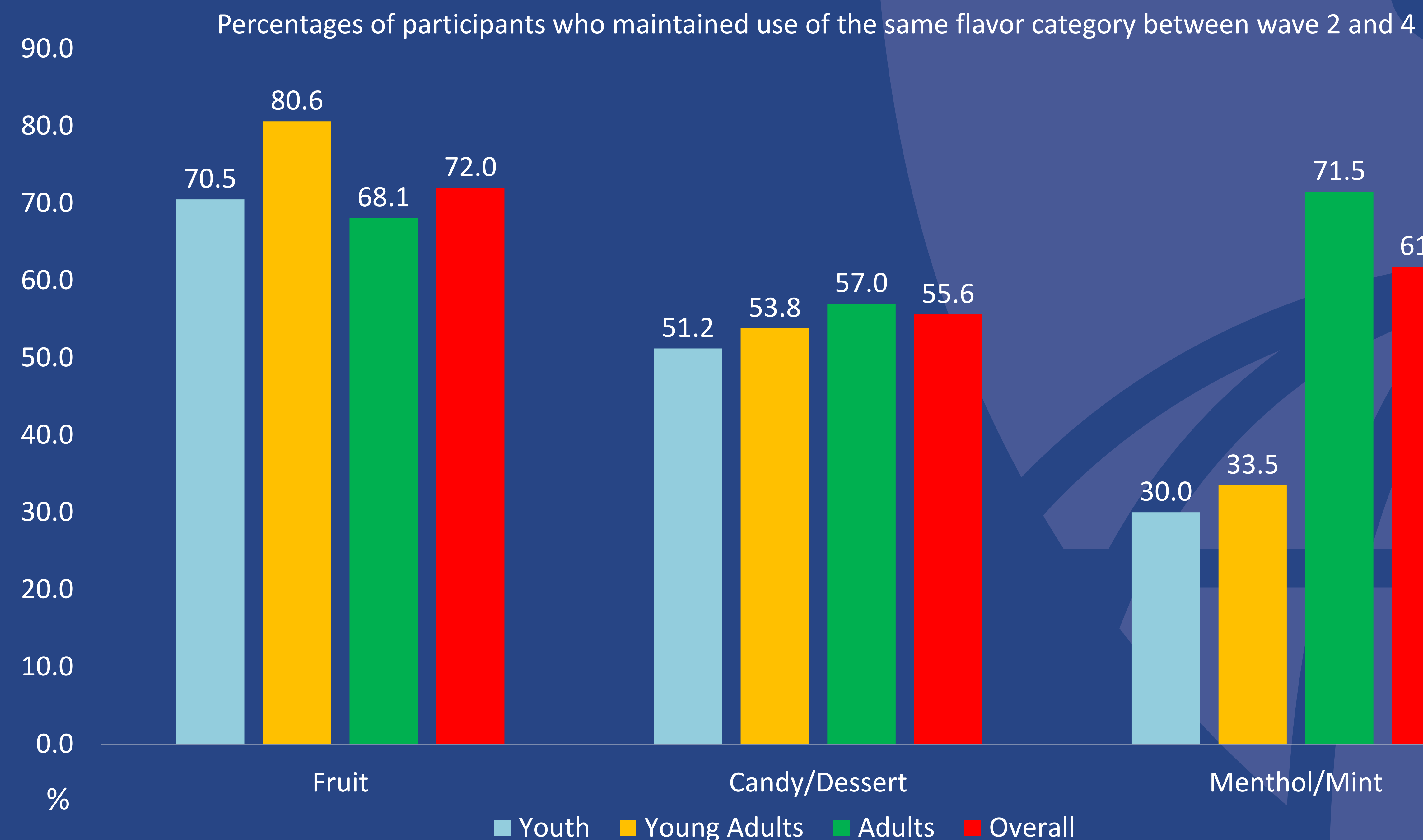
## Methods

- We used the Population Assessment of Tobacco and Health (PATH) Study wave 2 (2014-2015), wave 3 (2015-2016), and wave 4 (2016-2017) youth and adult data.
- A cross-sectional analysis to assess the percentages of ENDS flavor use in each wave and longitudinal analyses including mixed effect logistic regression models to assess the changes in ENDS flavor use among ENDS users were conducted.

## Results

- Overall, 72.0% of fruit users, 55.6% of candy/dessert users, and 61.8% of menthol/mint users in wave 2 maintained use of the same flavor in wave 4.
- For all age groups, over two-thirds remained fruit flavor users and over half remained candy/dessert flavor users over time.
- While the majority of older adults (71.5%) remained menthol/mint use over time, this percentage was 30.0% for youth and 33.5% for young adults.

# A majority of non-tobacco flavor users maintained use of the same flavor over time.



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**Competing Interests:** Dr. Eissenberg is a paid consultant in litigation against the tobacco industry and also the electronic cigarette industry and is named on one patent for a device that measures the puffing behavior of electronic cigarette users and on another patent for a smartphone app that determines electronic cigarette device and liquid characteristics

## Results (cont.)

- In addition, across waves, the most used flavor was fruit among all age groups in all waves, followed by candy/desserts for youth and young adults. For older adults, menthol/mint in wave 2 and tobacco flavor in waves 3 and 4 were the second most used flavors.
- In the regression models, none of the changes in flavor use were significant among youth, after adjustment for sex and race.
- Among young adults, the decrease in menthol/mint use was significant in the regression model but not significant for fruit and candy/dessert, over time.
- Among older adults, the decreases for all non-tobacco flavors over time were significant.

## Discussion

- Because of consistent flavor use among youth and young adults in particular, a ban on flavors might reduce ENDS use in these groups.

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