

Review of: "Youth Patterns of Use of Electronic Nicotine Delivery Systems (ENDS) Use, Population Assessment of Tobacco and Health (PATH) Waves 4 – 5.5"

Donald Miller¹

1 North Dakota State University

Potential competing interests: No potential competing interests to declare.

The data presented here are very important for following trends over time and show the impact of continued product innovation in the field, as well as the impact of growing FDA regulation.

The strengths of the study are the use of large nationally representative datasets, and that trends are similar to 2 other national youth surveys, so are likely to be accurate.

This report is descriptive only and cannot make any causal inferences. However, the authors do make some cautious and reasonable inferences about why the trends are changing.

There are a few limitations. The PATH data did not distinguish between mint and menthol flavors despite mint flavors recently being removed from the market. Due to the lag in reporting of data, it only reflects through 2020, whereas 2 other national surveys (NYTS and MTF) provide more current data. Regulation and marketing of ENDS products are changing so rapidly that data become out of date quickly. The year 2020 also saw the advent of Covid, and the federal law restricting sales of tobacco products to persons 21 years and older. I note the authors do not discuss the potential impact of the Tobacco 21 law, and something about this should be added.

There are no data on population subgroups such as gender, race, rural vs urban populations, and different socioeconomic groups. We know there are important differences in tobacco and vape use across groups and I hope the samples are large enough to validly explore subgroups in future publications.

Specific questions for the authors:

- 1. In the introduction paragraph 2, the authors say the PATH point estimates differ in only a minor way from the NYTS and MTF surveys, but in paragraph 5 they say estimates are quite different! Which statement is true?? Could the authors give better insight into why the NYTS and MTF national surveys give different prevalence estimates and how large the differences are??
- 2. As above, the authors should discuss the impact of the federal Tobacco 21 law.
- 3. Finally, I am intrigued that disclosures reveal Juul Labs "supported preparation of the manuscript." I can think of no legitimate reason for this conflict of interest and hope the authors will address it.

