Adolescents’ Initiation and Past 30-Day Use of a JUUL E-Cigarette Containing Pod Flavors Marketed and Not Marketed by JUUL

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Background

The U.S. Food and Drug Administration (FDA) has identified flavors as the “core of the epidemic” of youth use of e-cigarettes that emerged in 2018. The FDA has also asserted that much of the rise in youth e-cigarette use observed between 2017 and 2018 was driven by one brand – JUUL.

In 2018, JUUL, which manufactures pre-filled, disposable e-liquid pods for use in the JUUL e-cigarette, became the fastest growing and highest selling brand of e-cigarettes/resources products in the United States. However, during the same period, an increasing number of cigarette manufacturers began marketing pre-filled-flavored e-liquid pods that are plug-compatible with the JUUL e-cigarette and/or closely resemble JUUL pre-filled pods in size, shape and color. Identifying the pod flavors with which youth have initiated use of a JUUL e-cigarette and the pod flavors that youth are currently using in a JUUL e-cigarette is therefore critically important.

Methods

A non-probabilistic sample of U.S. adolescents aged 13-17 years (n = 9,872) was recruited from an internet research panel to complete an online survey between 23 November and 13 December 2018. Individuals were excluded if they had not seen or heard of JUUL e-cigarettes before this study. Parental consent and youth assent were obtained.

No images of e-cigarettes, e-liquids or pod refills or packaging were shown at any part of the survey.

The flavor of the first pod ever used in a JUUL e-cigarette was assessed in 2,689 ever-users of a JUUL e-cigarette by the question, “During the past 30 days, which pod flavors have you used in your JUUL e-cigarette, even once or twice? (Select one or more - please read the list carefully)”. The other 28 flavor names were identified from the websites of other e-cigarette/e-liquid manufacturers as flavors offered by at least one manufacturer other than JUUL.

Results

Ever-users of JUUL e-cigarettes were more likely to report having initiated use of a JUUL e-cigarette with a pod containing a characterizing flavor (54.0%) than a menthol/mint flavor (31.3%) or a tobacco flavor (5.6%). JUUL ever-users were also more likely to report having initiated use of a JUUL e-cigarette with a pod containing a flavor not marketed by JUUL (31.3%) than with a flavor marketed by JUUL (13.3%).

JUUL users were most commonly reported as the first flavor tried in a JUUL e-cigarette (8.8%, 6.3% and 6.1% of ever-users, respectively), and the flavors most commonly used in a JUUL e-cigarette in the past 30 days (14.9%, 12.4% and 14.9% of current users, respectively). ‘Iced Strawberries’ and ‘Watermelon’ were the flavors most not reported by JUUL, that were most commonly reported as the first flavor tried in a JUUL e-cigarette (3.8%, 3.3% and 3.6% of ever-users, respectively), and the non-JUUL flavors most commonly used in a JUUL e-cigarette in the past 30 days (12.2%, 6.9% and 6.4% of current users, respectively).

Conclusions

Around half of adolescent ever-users of a JUUL e-cigarette reported initiating use of a JUUL e-cigarette with a flavor not marketed by JUUL, and the majority of current users reported using the JUUL e-cigarettes in vape flavors that are not marketed by JUUL.

Results give insight into the flavors that adolescents say they have used and are using in a JUUL e-cigarette, but do not give insight to the identities of the manufacturers of these flavors.

It is possible that a proportion of youth have difficulty identifying the brands of pod-style vaping products, pods and flavors they are using. Researchers should be mindful of several factors when designing surveys to measure youth use of JUUL vaping products, including:

1. The availability of ten pod mod-style vaping devices on the U.S. market that closely resemble the JUUL e-cigarette in size, shape, color, weight, look, feel and operation.
2. The increasing marketing of flavor descriptors by pod manufacturers other than JUUL that are verbally similar or identical to a menthol/mint flavor or a tobacco flavor.
3. The increasing marketing of flavor descriptors by pod manufacturers other than JUUL that are visually similar to JUUL pods in shape, size and color.

No images of e-cigarettes, e-liquids or pod refills or packaging were shown at any part of the survey.

The proportions of JUUL ever-users and JUUL current users who reported initiating and past 30-day use of any flavor in a JUUL e-cigarette are reported, weighted to be nationally representative of the U.S. adolescent population on age, gender and census region.

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